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Original Communications.

SYRINGOMYELIA.*

F. Arnold Clarkson, M.B.

Syringomyelia (*συριγξ*—a hollow pipe), or gliosis spinalis, is a peculiar condition of cavity formation in the spinal cord, first described as a pathological entity in 1824. It was not, however, till 1887, after the publishing of monographs by Schultze and Kahler, that we were able to diagnose the disease during life. Since then, although it is a comparatively rare condition, a good many cases have been observed, Schlesinger, in the year 1895, giving references to 526.

The following case is interesting because it presents some features of the disease in its early stages.

Albert L.—, age 23, born in England, the only child of healthy parents, who are both living. In childhood he had tuberculous adenitis on the left side of the neck, and one of the glands can still be felt slightly enlarged and hardened. About the same time, also, he had "trouble with his eyes," for which he was treated by Dr. Nettleship. This was probably a phlyctenule.

Six years ago he was unconscious for some minutes after a fall from a bicycle, his left ear being partly torn from the head.

Three years ago, while working in a deep excavation, a lump of clay fell about 18 feet and struck him between the shoulders. He was off work for three weeks after this accident, not confined at all to bed, and feeling, as he expressed it, "not quite up to the mark," but he noticed afterwards that his right hand,

* Read before the Academy of Medicine, Toronto, November 12th, 1907.

when cold, became numb. Brisk rubbing, however, restored both warmth and sensation.

He recalls now, that twelve months ago he remarked to his mother that the water in the wash-basin was cold only to his left hand.

Present Illness.—Since he first landed in Canada last April, the fingers of his right hand have gradually become stiff and the hand itself has withered. Four months ago, while working at his trade of a bricklayer, he cut his hand with a trowel, but felt no pain and did not know for some time that the skin had been broken and that the wound was bleeding. This injury took a long time to heal and the scar is still present. A few days ago he had a blister on his thumb from using an axe. This was ruptured in the course of his work, and yet he felt no pain. He has noticed that the goose-flesh comes more quickly on his right forearm than on other parts of his body. He perspires, too, more freely on the right hand. Because he is no longer a capable workman he has had to relinquish his employment, and he now presents himself for medical treatment for the atrophy of the hand muscles.

Physical Examination.—The patient has a splendid muscular development, having been for some years a trained gymnast. The optic discs are healthy. The ocular muscles and the pupillary reflexes are normal. Hearing, vision, taste, and smell seem to be unimpaired. The skin of the right hand is purple and cold to the touch, although the patient says it feels perfectly comfortable. The right forearm measures 25 cm.; the left 27 cm. There is no tremor of either hand. The thenar and hypothenar eminences have almost disappeared, and the metacarpal bones are prominent from the atrophy of the lumbrical and interosseous muscles, while the condition of *main en griffe* is quite evident. The patient says that he noticed the wasting first in the small muscles of the thumb. The movements of the fingers are much impaired. He cannot approximate the fingers and thumb, nor can he abduct the fingers. The grasp of the right hand is very weak, and its movements clumsy, so that he has difficulty in buttoning his clothes. The nails on his hand are slightly ridged. The muscles of the arms and forearms are firm and apparently healthy. There is no spinal curvature. The muscles of the right thigh are less firm than those of the left. His station is good and he has no ataxia.

The Reflexes.—Are absent in the right arm and only slightly present in the left. The patellar reflex on the right side is in-

creased, but there is no ankle clonus. Neither the Babinsky nor Mendel reflex can be obtained.

Sensation.—All portions of the body examined showed an acute sense of touch, and a perfect muscular sense. Heat and cold, however, are not felt at all, or very imperfectly over the right hand and forearm to the elbow, and over the anterior and posterior surfaces of left hand and arm half-way to the elbow. In all other parts of the body the thermal sense is very accurate. Over the right hand, back and front, to the wrist, there is a complete absence of pain. The boundaries of these zones of analgesia and thermo-anesthesia vary slightly at different examinations. There is no involvement of the sphincters and the course of the disease so far has been painless.

The Etiology is absolutely unknown. In many cases it is probably due to an anomalous embryonic condition, which, sooner or later, gives rise to cavities in the cord, uninfluenced by external circumstances. Blows upon the back have been noted many times, and this case adds another to the list. Buzzard has seen syringomyelia develop within a short time after an injury to the spine. Cases have been observed following infectious diseases and childbirth. Syphilis, alcohol and heredity, three etiological factors so very prominent in neurology, play no part whatever in this disease. The age of onset is most often between 11 and 30, and males are greatly in the majority.

Pathology.—This disease is characterized by the formation of cavities within the spinal cord, sometimes involving the central canal, but more frequently embracing the posterior commissure, and extending laterally in an irregular way to the posterior horns and posterior columns. The anterior cornua may be involved, but the lateral tracts almost always escape. The form and size of the individual cavities are as irregular as the mode of extension. Very often a portion of the interior of the cavity is lined with cylindrical epithelium, the remains of the central canal, and a zone of thick neuroglial tissue forms a wall, which is usually ruptured at the autopsy, allowing the turbid fluid contents to escape.

The lower cervical and upper dorsal regions are always first involved, extension taking place later either upwards or downwards. Microscopically, we find an increase of neuroglia around the cavity, the cells nearest the lumen often being vacuolated, and showing other signs of breaking down. Few capillaries are found in the wall itself, but in the surrounding tissue the vessels are abundant, more tortuous and of greater

calibre than normal. Small hemorrhages have occasionally been noted.

The theories to account for this remarkable condition are as numerous as they are unsatisfactory. It is supposed by some that syringomyelia always develops in a congenital defect of the cord; that the central canal is unduly distended with fluid at birth, and that around this the epiblastic elements proliferate, and afterwards extend into the normal tissue. This would account for the cylindrical epithelium lining the cavity. Other observers consider that during the closure of the central canal in the embryo, a second canal is formed, about which occurs neuroglial hyperplasia, and subsequent degeneration. There are not wanting, too, those who would attribute the gliosis to toxic or to bacterial causes, some color being given to the latter theory by a consideration of that peculiar form of syringomyelia called Morvan's disease, occurring with comparative frequency in some of the French fishing villages. In a number of instances, cavities have been found subsequent to disease of the spinal arteries. This would, perhaps, explain those cases following injuries of the back. But it is well to bear in mind, in considering these theories, the fact which Weigert has emphasized,—that the neuroglia is merely a substance which nature uses to fill up a space, and that its proliferation is only a sign that nerve tissue has been destroyed. His studies of neuroglia lead him to the conclusion that the wall of the cavity is not a true glioma, that, in other words, the gliosis is not the essential feature, but only a secondary result. Lastly, it must be mentioned that sarcomata and other tumors of the cord may degenerate and give rise to cavity formation. (Bertholet.)

From a consideration of the paralysis, and the areas of analgesia and thermic anesthesia in this patient, the lesion must be located in the 6th, 7th and 8th cervical and 1st dorsal segments.

Symptoms.—Although the clinical features are complex, there are three characteristic symptoms which are usually present together. These are (1) A loss of thermic and painful sensations in some part of the body, but the muscular and tactile senses are retained. This has been named by Charcot, "dissociated anesthesia." (2) Paralysis of the amyotrophic type. (3) Trophic disturbances of the muscles, bones and skin. Starr makes the statement that one of these symptoms alone should excite suspicion, but the presence of any two of them make the diagnosis probable. Besides this triad, we often find a spastic paraplegia, the initial stage of which is shown in our

patient by the increased knee jerk. The distribution of the symptoms will, of course, depend upon the location of the spinal lesion, and if the whole segment of the cord is involved, the general features of transverse myelitis will be present. The thermic anesthesia which was the first clinical sign of the disease in this case, showed itself about one year ago, but did not attract any attention. The sense of pain has probably been absent for some months, for he has injured his hand frequently without causing himself any inconvenience. The distribution of the dissociated anesthesia is always irregular, and only rarely symmetrical on the two sides. In the early stages there may be only a blunting of the thermic sense, and the analgesia may be patchy; but when the disease is well developed, the patient cannot distinguish between iced water and boiling water, and a surgical operation might be performed without pain. Progressive muscular atrophy, usually invading the hands, and giving rise to paralysis of the ulnar type, is present in more than one-half the cases of syringomyelia. The condition you see in the patient's right hand, has developed in about eight months. The muscles of the forearm are already involved, to some extent, and I fear the process is also beginning in the left hand. Although the Aran-Duchenne paralysis is the most common, occasionally the shoulder muscles may suffer first. Later, the muscles of the spine are invaded, producing a scoliosis—a frequent complication of the disease. But the legs, for the most part, escape damage. The degenerating muscles exhibit fibrillary contractions, but the electrical reaction is retained for a long time. Of the trophic disturbances, those affecting the skin are most common. In this case, we have a hyperemia of the skin of the arm and abnormal sweating. The abrasions, too, have been long in healing. The nails may be hypertrophied and brittle; the bones and the joints are often involved, chiefly those of the upper extremity. Charcot's joint is found in this disease almost as frequently as in tabes. The spinal reflexes are, as a rule, disturbed, diminished or entirely lost in the affected arm, while the knee jerk is increased. Only in rare cases are the sphincters involved.

Course.—The course of syringomyelia is essentially chronic. Sometimes the condition will proceed a certain distance and then remain stationary for years. Unless the medulla is involved, the patient usually dies of intercurrent disease.

Diagnosis.—At first the disease is often mistaken for *amyotrophic lateral sclerosis*, which, however, has neither sensory nor trophic symptoms. Anesthetic *leprosy* has also to be

taken into account, and may be distinguished by the thickening of the nerves, the finding of the bacillus, and the absence of sensory dissociation. *Progressive muscular atrophy* is usually symmetrical and is attended by no disturbance of sensation. There is an absence, too, of spasticity of the legs. But rare cases of *tumor* of the gray matter of the cord may give rise to symptoms identical with those of syringomyelia, and must be taken into account in this case.

Treatment.—No drugs can have the slightest influence, but some months ago two German physicians reported an apparent cure from the use of the X-rays, applied to the part of the spine immediately over the cavity. This treatment is now being carried out on this patient by Dr. R. A. Thomas, in the electro-therapeutic department of Grace Hospital, and I hope to be able to report success at some future meeting of the Academy.

THE ETHICS AND DEPORTMENT OF THE OPERATING ROOM.*

JOHN HUNTER, M.B.

How great would be the amazement of a barber-surgeon of the medieval ages, when his operating-room was any place wherein the patient might happen to be—the living-room in the hovel of squalid misery, or in the richly-draped palatial chamber of the rich,—if he were to step into a modern operating-room, with its polished or mosaic floors, enamelled furniture, marble seats, brass railings, glazed walls and glass domes. With the barber-surgeon the buccaneering germs were free to gratify their insatiable appetites, whilst the modern surgeon forbids even their presence, and if, peradventure, they are found about the wound they are speedily exterminated by antiseptics.

The modern operating-room is an evolution of scientific surgery. To Lord Lister, Pasteur and a legion of other notable scientists, we of the twentieth century are greatly indebted. The heritage to which we, as members of the medical profession, become the legitimate heirs, brings with it great privileges, but also equally great responsibilities. This fact naturally leads up to the ethics of the operating-room.

ETHICS.

Since ethics can be defined as "a system of rules for regulating the actions and manners of men in society," and as we are members of a great fraternal circle, the ethics of the operating-room rest on the common basic principles so tersely summed up in the so-called "Golden Rule." But as every nation has its own language to give expression to its needs, emotions, and aspirations, so every calling has to evolve its own code of ethics from common fundamental principles, *e.g.*, the theft of money in social life finds its counterpart in the unprofessional taking of a patient from another physician. The work of the operating-room is of an exceedingly complicated character, as it involves the relationship of the surgeon to his patient, to his confreres, and to his profession. In no other vocation in life is a man's honor put to a more severe test than in the operating-room. The subtle temptation comes to unduly urge on an operation that the surgeon's reputation may be enhanced, a large fee obtained, or some one else prevented from getting

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the case. The ethics of the operating-room imperatively demand that the interests of the patient must alone decide the question of operation. Flagrant violations of ethical laws may, and sometimes do, occur after the operation. Dr. A. is asked by Dr. B. to operate on his patient. Some months after Dr. B. finds that his patient, instead of coming back to him, goes to Dr. A. with his minor ailments. Dr. A. ignores Dr. B.'s claims altogether and treats the patient, and by so doing begins a life-long feud between Dr. B. and himself. Dr. A.'s conduct only becomes ethical when he has arranged with Dr. B. as to who the attendant should be.

The question of fees is often a much-mooted point. When the patient's means are limited and when there has been need for lengthened attendance before the operation, if the surgeon charges a high fee, the attending physician is deprived of a large share of his just reward. In all such cases ethics demand that in regard to remuneration the interests of both physician and surgeon be duly respected. Fees again come up as a factor in the relationship of the surgeon to the anesthetist. Is an inexperienced man ever chosen to save to the surgeon the fees that would otherwise go to an expert anesthetist? Ethical laws would hold that the safety of the patient is never to be jeopardized by the mercenary interests of the surgeon.

The importance of surgical work, as compared with the medical care and treatment of a case, involves an ethical question. The surgeon may not say so in words, but he may be quite willing to have the patient imagine that his work is of considerably more importance than that of the physician. In fact, it is not at all uncommon for the physician to find that his status is never quite the same with the patient or family as it was before the operation. In these cases the surgeon's ethical sin is one of omission in that he has failed to correct an erroneous impression that militates against his medical confrere.

The list of ethical problems that project themselves into the operating-room might be very much extended, but time will only permit of the discussion of one more, and it probably the most debatable one that confronts the surgeon in his work,—viz., who should do the operation? In isolated districts the one man must be both physician and surgeon, but the erection of hospitals in towns and cities has caused some division of labor, one section of the profession becoming better known as surgeons and the other as physicians. This division enables men to obtain a larger experience, and other things being equal,

great skill. The crucial question comes up as to whether the family physician should operate on his own cases or pass them over to the man who is doing a much larger amount of surgery. There is probably little or no conflict of opinion in regard to cases in minor surgery, or in extra hazardous ones. In regard to the cases between these extremes, *e.g.*, the removal of the appendix, is the family physician ever justified in exposing his patient to greater risk in doing the operation himself than would be involved in having the services of a more expert operator? On ethical grounds, the safety of the patient outweighs every other consideration, and, therefore, neither reputation or pecuniary interest should be allowed to govern his decision. This, no doubt, is often looked upon as altogether too great a sacrifice for the family physician to make, knowing full well that in so doing he is not only impairing his own reputation, but also enhancing the reputation of another at his own expense. However, ethics make a strong appeal to the physician. They ask him to place the interests and safety of his patient above all personal considerations. Again, the honor of the profession has its claims. Any one who has visited numerous hospitals must have seen many operations that reflected no credit on modern surgery. It is scarcely possible for the general practitioner who has to depend almost entirely on his own practice for whatever cases in surgery he may have, to acquire the skill, dexterity and resourcefulness of the surgeon, to whom a great many cases are sent by his confreres. Can any one dispute the statement that the interests and safety of the patient and the honor of surgery will not be much better conserved by the latter than by the former? If this be true, the ethics of the operating-room demand a large measure of self-sacrifice on the part of the general practitioner. It holds as true in the surgical as it does in the spiritual world, viz., "that he who would save his life must lose it." Personal and pecuniary losses may be fully compensated in the moral gains that come from self-sacrifice.

Deportment.

It can be truly said that we learn by doing things. If the thoughts and emotions that sway the patient as he lies on the operating table awaiting the anesthetist, can only be known through an experience that few of us have had and fewer still will ever crave to have; we must rely upon our imagination to "picture the scene." Of one thing all can feel assured that the

few moments preceding the operation are the most strenuous in regard to the number and variety of the thoughts and emotions that crowd into it, of any period in the patient's life. If it be a first experience and if the operation be a critical one, to the purely mental perturbations, there may loom up before the soul not only the spectre of a past life, but a dim outline of the shore of "that undiscovered country from whose bourne no traveller returns."

However great the triumphs of surgery have been,—and they are only equalled in magnitude by the inestimable boon it has been to suffering humanity,—yet the fact remains that the patient's life is in jeopardy from the anesthetic, shock or unexpected complications. Although probably no other place can lay claim to so many triumphs as the operating-room, yet the awful suddenness of some of its tragedies is simply appalling. Whilst the story of its triumphs is a splendid inspiration to the patient as well as to the surgeon and all associated with him, yet the possibility of a tragedy hangs over the table like "the sword suspended by a brittle thread." This ubiquitous spectre in the operating-room makes it veritably "holy ground," and as such, what constitutes proper deportment in it? Perhaps this question can be answered best by stating what ought not to be "much in evidence" there. The decorum of the funeral service has no place in the operating-room, although the possibility of the need subsequently of such a service cannot always be eliminated. Hope should create such a buoyant spirit that it would manifest itself in all present. It is absolutely no place for either the amusing or boorish joke, social gossip, medical or political disputations. Nothing should be said or done that would disturb the patient, since it is a well-established fact that all the senses become hypersensitive during the early stage of anesthesia. For this reason everything should be in readiness for the operation before the patient is brought in. If the surgeon has forgotten any of his instruments, or if special ones are not available, the fact should not be discussed, for although it may be a trivial matter in itself, yet it may cause mistrust and anxiety to the patient. The anesthetist must remember that his part generally involves the most danger to the patient, and, therefore, should command his sole attention. I have no hesitancy in saying that when an inquest is held in case of sudden death during anesthesia, the anesthetist should be subjected to a rigid examination by an expert, and if any negligence be proven, punishment should follow it, as for any other criminal act. It is a mooted question as to what ex-

tent conversation is permissable in the operating-room. It can be laid down as a safe rule that the less said during an operation the better. The conversation itself may be distracting to those engaged in the operation and the forced expiratory efforts required in speaking may carry infected air to the wound. When the surgeon or assistant has to speak the face should, if possible, be turned away from the field of operation. All pompous airs are alien to, and very unbecoming in the operating-room, as the human body is the most complex and wonderful of all the Creator's work in the physical world, and as many factors pertaining to disease yet remain the most profound of all mysteries.

The deportment of assistants and nurses should be characterized by strict and courteous attention, and by alertness and dexterity in the discharge of all the duties assigned them.

The deportment of spectators, when present, should be in line with that observed in church service. Joking or disputing, or what is not infrequently seen, brushing dusty spots off their coats,—all these are boorish and entirely out of place in the operating-room.

In conclusion, can it not be truthfully stated that in no other place can scientific attainments, ethical refinement and moral goodness be better exemplified than in the discharge of the duties pertaining to the operating-room?

PHANTOM URETERAL CALCULI.

F. J. McNULTY, M.D., PETERBORO.

The introduction of the X-rays as a diagnostic aid in cases of renal calculi, led surgeons to believe that by its use a positive opinion could be given in cases where a shadow was definitely outlined. Accumulated experience, however, has shown the fallacy of this conception. For some years it has been known that one may fail to obtain a shadow even in the presence of stone, but it is only in more recent times that reports of cases have appeared in which the shadow has led the surgeon astray—cases in which the Roentenogram plainly and clearly outlined a shadow, indicating the presence of stone, but in which operation revealed no trace or evidence of such. A case of this nature came under my observations about one year ago, the history of which is as follows:

P. D., aged 25, a farmer, for about two years suffered from paroxysmal attacks of pain extending from the costal margin down into the pelvis on the left side. The attacks were always brought on by exertion, and varied in severity, in some cases being merely a dull, aching pain, relieved by recumbency and rest; in others, a severe, agonizing attack, the pain shooting down along the course of the ureter and into the genital organs, inducing collapse with profuse perspiration and vomiting. In his first two attacks medical aid was summoned ten miles in the country and morphia given hypodermically; in subsequent attacks, which recurred every three or four weeks, morphia pills were taken by mouth. Tenderness over the kidney and in the region of the loin was always present after these attacks, but no blood was ever discovered in the urine. Thus two of the three cardinal symptoms of stone were present—the severe attacks of pain and local tenderness; the third—blood in the urine—being absent. No mobility of the kidney could be made out, and, the left side being affected, this was not strongly suspected. The patient was a robust, strong young man, with a good family history, and, excepting for the present trouble, had always enjoyed the best of health. No enlargement of the organ could be made out, no chills or elevation of temperature, daily and normal evacuation of the bowels, and in the intervals between the attacks he looked and felt well. A not very marked vesical irritation was complained of for a day or so after the attacks, necessitating urination every two or three hours, three or four ounces being voided each time. The urine was normal in appearance and quantity; no sediment, specific gravity 1022; ex-

cretions normal; microscopically a few epithelial cells and uric acid crystals were seen, but no pus or blood cells. A provisional diagnosis of stone was made, and for confirmation an X-ray examination was suggested. For this purpose the patient went to Toronto, where an eminent physician was first consulted, who partly confirmed the diagnosis, but thought a skiagram should be taken before a positive opinion could be given. He was consequently referred to the skiagrapher who the same day took a skiagram. This clearly showed a shadow just above the brim of the pelvis and in the line of the ureter, which was interpreted as a stone impacted in that canal. The shadow was distinct and clear in outline, and in a note from the skiagrapher, who also kindly sent me a skiagram, a positive opinion was given as to the presence of stone. Two weeks later the patient came in for operation. During these two weeks he abstained from work, lived very quietly, and had no attacks of pain. The incision employed eventually corresponded to the lumbo-ileo-inguinal incision employed for removal of a tuberculous kidney and ureter, and extended from the last rib, adjacent to the edge of the erector spinae, downwards and forwards in front of the anterior superior spine of the ileum, and then parallel and about two inches above Poupart's ligament, down to almost its centre. The structures were divided or separated down to the peritoneum, which was then carried upwards and towards the middle line, as in the operation for tying the external or common iliac arteries. The lower limb of this incision was first made, as it was expected to find the stone in that part of the ureter where it crosses the brim of the pelvis, as there is naturally a slight narrowing at that site. The ureter was readily found and palpated, first downwards to well below the pelvic brim, and then upwards to the renal pelvis, but no stone was felt, nor was there any evidence in the ureter itself of any thickening or dilatation, as if obstruction had at any time occurred. The incision was then extended upwards and the kidney delivered onto the loin and the pelvis and renal substance palpated, and the latter then incised from pole to pole and its interior thoroughly examined, but no stone was discovered. A ureteral bougie was then passed through the incision in the kidney into the ureteral orifice, but could not be passed downward to any great length, as the delivered organ formed an angle with the ureter, so a small incision was then made in the ureter itself lower down, and from this point the bougie was readily passed on into the bladder. In doing this the two precautions noted by Fenwick were borne in mind, namely, that the ureteral catheter passed from above

downwards can easily slide over the mucous-covered stone, for, as he points out, all arrested ureteric stones are embedded in thick jelly, and the surgeon may be unaware that he has touched one; and, secondly, that the bougie may never reach the bladder at all, but press the ureter down in front of it at the spot where the tube bends upwards to enter the bladder. In this case no obstruction was encountered. A stitch was then inserted in the small opening of the ureter, three mattress catgut sutures passed through the substance of the kidney, the capsule united with a continuous catgut intine and the long incision in the muscles and skin closed in the usual position, no drainage being employed. The patient was catheterized eight hours after the operation and bloody urine withdrawn; the urine continued bloody for four or five days, none escaping by the lumbar wound. One week later the bladder was sounded for stone, with a negative result. It is now over eleven months since the operation, and the patient, though engaged in heavy farm labor during the last six months, has had no further symptoms of pain or distress. This was clearly a case of what has come to be known as phantom calculus, and the three questions that arise out of a consideration of the case are:

(1) To what were the symptoms due?

(2) To what was the shadow due?

(3) Could a further clinical investigation of the case, previous to operation, have eliminated the presence of stone?

The fact that the patient has had no return of symptoms since the operation would lead one to infer that the condition had been one of slight mobility of the kidney, bringing on attacks comparable to Dietl's crisis, as seen in cases of pronounced floating kidney, the relief of the symptoms being due to the organ becoming fixed by adhesive inflammation. This, I think, is the most reasonable explanation. No mobility of the organ could be made out previous to the operation, but the patient was so muscular and well-developed that mobility of the first, or even second, degree might have existed and yet been impossible of detection by palpation. At the time of the operation the bed of the kidney was opened into from below. The relationship of the parts did not suggest an abnormal condition, but the organ was quickly delivered onto the loin without very close observation being made as to its mobility, and subsequently, when no stone could be discovered and we began to look about for some other condition to account for the symptoms, it was impossible for us to decide with certainty whether increased mobility had previously existed or not. It is said that in the normal condition the kidneys move an inch and a half with each respiration, but why this should be so,

seeing that these organs are retroperitoneal, it is somewhat difficult to understand. There was no appearance of tuberculosis of the organs or the ureter, and no congenital anatomical anomalies existed; the bougie readily passed through the ureter, thus eliminating stricture. Monserrat, of Liverpool, reports a case of constriction of the ureter with symptoms and history very similar to this case, the symptoms being referable to the right side, appendicitis diagnosed and the appendix removed, but without affording relief—the condition was eventually discovered by catheterizing the ureters. Small stones travelling along the ureter and on into the bladder might give rise to identical symptoms, but then there would be a history of these passing through the urethra, or, if retained, giving rise to continued vesical irritation—in addition, careful sounding of the bladder did not reveal the presence of any foreign body. It might be possible for loose accumulations of uric acid crystals in the pelvis of the kidney or in the ureter to give rise to temporary obstruction, and for these to be eventually washed away by the vis-a-tergo, and passed, unnoticed, in the urine. Gastroptosis, with intestinal derangements, may produce attacks simulating renal colic, the pain being more of a dragging character—a case is reported where proper diet and hygienic conditions relieved a patient of attacks that had persisted from childhood. However, whatever the exact determining cause of the colic-like attacks, the patient has received absolute relief and is able to follow his usual occupation without restraint.

The most likely condition to give origin to the shadow in the skiagram would be a fecal concretion, lying in that part of the descending colon placed in front of the ureter. The patient was submitted to the examination without any previous examination of the bowels, and it is just possible that a hardened fecal mass lay in the colon and in the direct path of the rays. It is said that scybalous masses are much more obvious in an X-ray photograph than a calculus, and to avoid a misinterpretation a contral skiagram should be taken in two or three days, the bowels always being well emptied; but in this case the patient returned to his home the same day and no further opportunity was given to do this. To make this report more complete I have urged my patient to have a second skiagraphic examination, but so far have been unable to induce him to do so.

The whole question of phantom ureteral calculi came up for discussion before the Philadelphia Academy of Surgery, and is reported in the *Annals of Surgery* for February, 1907. Numerous X-ray plates were presented, showing shadows which were

thought to be those of ureteral calculi, but on operation no calculi were found. Da Costa operated upon such a case and found a calcareous lymphatic gland. Shoemaker found a loose calcareous mass the size of a pigeon egg free in the peritoneum. T. G. Beckett, skiagraphist to Alfred Hospital, Melbourne, reports and illustrates a case in the *British Medical Journal*, Oct. 19th, '07, in which operation showed the shadow to be due to calcified tuberculous deposits. The condition most frequently misinterpreted is a tubercular state of the glands lying along the course of the ureter and calcified mesenteric glands, but numerous other conditions have been met with. Phleboliths in the pelvic veins have given origin to shadows, as have also small dense masses of dermoid material, forming either the white or fat of dermoid tumors. Atheromatous plates in blood-vessels is another condition that has given rise to mistakes, as have also small hard calcareous masses in the end of the Fallopian tubes. On the right side a hard concretion in the tip of the appendix, pointing over the brim of the pelvis, has also given rise to a misinterpreted shadow. With these numerous conditions to be thought of, it is only to be expected that with ordinary methods inaccurate conclusions will be sometimes drawn. The question of importance to decide is whether the shadow is due to intra or extra-ureteral conditions, and for this purpose a means has been evolved by Fenwick which can leave no possible doubt in the mind of the operator. An explanation of Fenwick's method leads up to a consideration of the third question.

To eliminate the presence of stone when a definite shadow is shown lying in the track of the ureter requires the use of almost every clinical expedient known to the specialist in renal surgery. The generally accepted opinion has, until recently, been that if such a shadow is shown a diagnosis of stone is indicated, although the clinical symptoms may be equivocal; but experience teaches that all methods of examination are uncertain when taken singly, and that diagnosis should never be founded on one symptom or method alone, new or old, but that all should be employed, and only when the results of several coincide is it safe to form a positive opinion. While every symptom of stone is variable within wide limits, the absence of hematuria, even after the most acute attacks of pain, is strong presumptive evidence against the presence of a calculus; but, on the other hand, blood may be present in the urine in cases of movable kidney after attacks of Dietl's crisis, and so, for confirmation of our diagnosis, the more specialized methods of examination must be resorted to, which, of course, includes the use of the X-rays. No cystoscopic exami-

nation was made in this instance, as in cases of stone the orificial appearance of the ureter is not at all characteristic, unless pyelitis is present, or unless the stone is near the vesical opening; even obstruction to the urinary efflux is not essential unless the calculus is round and smooth and completely blocks the canal; urine may readily flow past an irregularly shaped calculus, such as are formed by the oxalates. Catheterizing the ureter gives more definite information as to the potency of the canals, but the method adopted and followed by E. Hurry Fenwick gives the most precise results. When in doubt, he passes along the ureter a bougie which casts a shadow with the X-ray; the patient is then radiographed, and as the bougie just fills the canal of the ureter he can tell at once, by tracing the ureteric shadow of the bougie, as to whether a stone is in the ureter or not. The plates illustrating this method are very beautiful, the bougie stands out very plainly, and mesenteric glands are distinctly outlined, lying just outside the track of the ureter. Fenwick claims there is but little difficulty in passing the bougie, using a ureter cystoscope in the male and a Kelly's tube in the female, but such methods lie more in the realm of highly specialized surgery, and not all of us can hope to command the manipulative skill to use them. However, this case illustrates that it is only by the adoption of these more advanced methods that the nature of obscure cases can be accurately foretold, and until such come into more general use operation will of necessity frequently precede precise diagnosis.

Society Report.

TORONTO GENERAL HOSPITAL EX-HOUSE STAFF CLINICAL CONFERENCE.

The ex-House Surgeons of the Toronto General Hospital held their first Clinical Conference at the Hospital, on the evening of October 24th, Dr. W. P. Caven, President, in the chair.

Tuberculosis with Mitral Stenosis.

Dr. Caven presented a patient, remarking:—"My special reason for presenting this patient is that he demonstrates the fact that you may have pulmonary tuberculosis in conjunction with mitral stenosis. Mitral stenosis is a condition which some would lead us to believe is incompatible with pulmonary tuberculosis. We are all familiar, I think, with the danger of mistaking cases of mitral stenosis for pulmonary tuberculosis—the symptoms suggesting pulmonary lesions—cough, expectoration of blood, and shortness of breath."

Dr. Kinnear, of the House Staff, then read a partial history of the case as follows:

Name, E. G.—Complaint. Patient complained of spitting blood, soreness in chest at level of manubrium sterni and on left side about mid-axillary line. He coughed a great deal at night and suffered from shortness of breath on least exertion. These symptoms had been gradually increasing since about one year ago.

Family History.—Father, mother, two brothers and three sisters living and well; one brother dead, killed in Japanese war.

Personal History.—Born in Russia, attended school until 16 years of age. Had acute rheumatism when 6 years of age. Came to Canada three years ago. Settled in Toronto and began working as a mattress maker. Worked at this till about two weeks ago. Factory well lighted and roomy, but not well ventilated. Patient does not use alcohol nor tobacco, drinks a little tea and a little coffee. No history of venereal disease. Patient's appetite always good; and he has had plenty of nourishment. Sleeping apartments not well heated nor cleaned.

Present Illness.—About a year and a half ago patient began to feel a pain in the region of the heart; when walking or going upstairs he would feel a shortness of breath and a thump-

ing sensation. About a year ago patient began to cough, which first began as a cold due to exposure to a draught. His coughing continued after the cold cleared up and gradually grew worse. Patient also expectorated a great deal of clear phlegm. Appetite gradually decreased. He lost in weight gradually; weight a year ago 145, weight now 125. He gives a history of sweating profusely at night, but no chills. He has gradually lost strength. About four weeks ago began spitting blood but had no initial hemorrhage. This continued until admitted to the Hospital. About three weeks ago he was sent to a doctor, examined, and advised to enter a hospital.

General Inspection.—Patient is lying in bed, head and shoulders supported with a number of pillows, breathing slightly labored but seemingly not suffering a great deal. Eye clear, fairly bright, lips and eye show anemic condition. Patient somewhat cyanosed, marked particularly over hands. Muscles fairly well developed. Confined to bed by order of his physician. Temp. 96.2, pulse 88, respiration 22.

Circulatory System. Inspect.—Apex beat seen in fifth interspace just internal to nipple line. No bulging over precordia. Pulsations seen at apex in epigastrium and markedly in neck in front of sterno mastoid.

Palpation.—Apex beat felt in fifth interspace just internal to nipple line. Pulsation felt in epigastrium and at root of neck. marked impetus given to hand over the whole of precordial region.

Percussion.—Area of deep dullness. Base—second interspace. Left border—mammary line at fourth rib.

Superficial Dullness.—At level of fourth rib about one inch internal to nipple line and at left border of sternum. A presystolic murmur is heard at apex of the heart.

Auscultation.—A distinct presystolic murmur is heard in the mitral area. A systolic murmur is heard over aortic area and propagated into root of neck. This presystolic murmur, best heard in the mitral area, may be heard over any part of the chest, either on the right or the left side. There is also present a systolic mitral murmur. The second sound follows immediately after murmur. Pulse 88, rhythm regular. Force lessened, volume rather empty. Tension poor; no sclerosis. Cyanosis present, well marked in hands and feet. Hands and feet cold; no dropsy. Fingers clubbed; circulation of capillaries poor.

Respiratory System.—Breathing 22 per minute; used mouth almost entirely. Cough short and hacking, produces soreness

in chest and throat. Expectoration, about one-quarter of a pint each day; yellowish, rather tenacious, and copiously streaked with blood. Amount of blood varies.

Microscopic Examination of Sputum.—Bacillus tuberculosis. Streptococci and staphylococci present.

Physical Examination.—Anteriorily, chest fairly well developed, a marked Harrison's sulcus present. This is more marked on the left side. Intercostal spaces small, no bulgings. Clavicles quite prominent; marked depression above and below clavicles. Respirations even, somewhat labored, expansion fair, breathing abdomino-thoracic. Posterior wall of chest shows a marked curvature, increasing the antero-posterior diameter of chest. There is also lateral curvature to the left.

Palpation.—Vocal fremitus seems to be fairly even over anterior chest wall, but more marked on the right upper posterior part of the chest. Expansion fairly good.

Percussion.—A boxy sound all over the right and left upper part of the chest just below clavicles. No area of dullness detected.

Auscultation.—Breath sounds are loud; local expiration prolonged over right upper posterior part of chest; cog-wheel breathing on area just below the right clavicle. Coarse râles are heard in left axillary area. Fine râles are heard in the left upper posterior part of the chest around upper and inner part of scapula.

Digestive System.—Appetite good; bowels regular; no diarrhea. Teeth not very good; tongue clean and digestive system normal in every respect.

Nervous System.—No history of nervous diseases; reflexes normal; no tremor. Special senses normal.

Genito-Urinary.—Negative. Examination of urine: S.G. 1024; reaction alkaline, no albumen, no sugar.

Dr. Caven pointed out that the case illustrates the fact that the minor manifestations of rheumatism are often associated with endocarditis, and that the mitral orifice contraction is most often associated with such a condition. Asked as to the cause of crepitations along the border of the third rib, Dr. Caven said that it had been attributed to the effect of pressure upon the lung at that part by the distended auricle.

Reverting to the prognosis in mitral stenosis, Dr. H. B. Anderson reported a case of a woman who had died, aged 67, who had suffered from the time she was 40.

The Chairman called attention to the danger of pregnancy in women with mitral stenosis; that the women suffering thus

are often warned against marrying; that in pregnant women abortion is considered by some authorities as justifiable. He, however, had seen a somewhat remarkable case in which a woman with mitral stenosis had been twice safely confined during a period of 15 years. The patient finally died. She succumbed to an embolism, gangrene of one leg and one arm supervening.

Mitral Disease—Sterility.

Dr. J. F. W. Ross cited cases of mitral disease in women accompanied with sterility. In certain cases of mitral disease complicating abdominal conditions he refused to operate. He had attended several cases of parturition complicated with mitral disease. In one case the labor was a most serious one, the patient, as is usually the case, sitting up during delivery. He considered it a very serious complication of pregnancy.

Brain Tumor.

The Chairman then presented a second patient, Dr. Kinnear giving the history of the case.

T. B. Complaint.—Defective sight, pain on using eyes, aching at upper border of orbit; headache across forehead, vomiting and inability to sleep. Duration: 3 months.

Family History.—Father dead, age 56. Rupture Mother, age 56, living and well; 3 brothers, living and well; 1 sister, living and well. No history of nervous trouble.

Personal History.—Born in Surrey, England. He came to Canada two years and nine months ago; he has done out-door work most of his life. Has always been very healthy previous to this attack, though he mentions headache and occasional vomiting as occurring for sometime previous.

Habits.—Drinks whisky, beer and tea in moderation. Also smokes and chews tobacco; denies venereal disease.

Past Illness.—Scarlet fever about 25 years ago. No histories of injuries to skull or eyes.

Present Illness.—Three months ago, in the afternoon, while working at his trade patient had a sudden feeling of dizziness and fell to the ground. (No previous history of anything of the kind.) Patient says it was a sunstroke; up to this time patient was perfectly well, having had no trouble with his eyes. On falling he did not lose consciousness; was taken home in street car and went to bed. In the space of about thirty minutes following stroke patient vomited two or three

times. A bad frontal headache followed and eyes ached. He went to work the next day as he did not think that "pains" incapacitated him from work. Sight was normal; worked for seven or eight days, his eyesight getting worse all the time; then had to stop because he could not see well enough to use his tools. On his way home he got a prescription from a chemist for external application. The chemist told him to use that and report for a time. He used this treatment for three weeks; eyesight getting worse all the time, with frontal headache most often in the early morning, and vomiting before breakfast three or four times a week, unaccompanied by nausea. From the first attack patient found difficulty in getting to sleep at night, which difficulty increased as time went on because of (1) pain in the eyes; (2) unsleepy feeling, and (3) slightest noise would wake him. Patient now went to see Dr. H., who sent him to the Eye and Ear Department of the Toronto General Hospital, where he has been treated for about one month for optic neuritis. His eyes have been getting worse; frontal headache, and vomiting before breakfast two or three times a week have continued up-to-date. Vomiting seems to definitely occur in the early morning.

Present Condition.—Weight, 160 lbs. Well developed, 5.5 in. in height; not confined to bed; temperature and pulse normal; face flushed; eyelids are slightly enflamed and half cover eye-ball. The eyes are very sensitive to light. He closes one eye to rest it while he uses the other one. The left eye is more painful than the right. Over the left eye the eyebrow is depressed as if every effort was being made to keep the eye closed; corneal reflex is normal. On exercising the muscles of the eyeballs it can be seen that some of them are not functioning normally.

Right Eye.—Intense swelling of right papilla, whitish patches of exudation. Veins are large, swollen, and tortuous; small flame-shaped hemorrhage around the disc above and along the nasal and temporal veins; white patch running up from centre of disc along ascending temporal vein about two disc diameters in length; one or two small flame-shaped hemorrhages along descending temporal not so large and not nearly so numerous.

Left Eye.—Very much the same, less exudation. Hemorrhages, etc., are below; in lower portion of disc is semi-circle of hemorrhages, clearer out in periphery.

Lids.—Slight weakness of levator palpebrum of left eye. Orbicularis all right; movement of each rectus on both sides is

defective; conjugate movement is greater toward the left than the right, the right eye not moving beyond central line. The right eye does not move outward and downward, nor upward and outward, while the left eye does. Left eye ceases to converge less than eight inches. Centre scotoma for red in left; right normal.

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No pigmentations, no eruptions, frontal headache, appetite good, bowels regular. Great difficulty at night—does not sleep more than one and a half hours, and the slightest noise arouses him; does not feel sleepy at night; does in day time. Pulse 72. Temperature 99.

Nervous System.—Frontal headache; great difficulty in sleeping at night; drowsy during the day. Corneal reflex normal. Facial muscles normal, tongue, in protrusion, diverges slightly towards right. Handclasp weak. No tremors. Knee jerk diminished; no atrophy of muscle; no locomotor symptoms.

Alimentary Symptoms.—Vomiting generally comes on suddenly while eating breakfast; feels no nausea—does not retch; no pain in the stomach at any time; vomitus has no perceptible odor; is occasionally streaked with blood. Occasionally is troubled with diarrhea; tongue heavily coated in centre with brownish fur; appetite good; bowels regular.

Respiratory System.—Negative.

Circulatory System.—Negative.

Treatment.—Pot. iodide in 10 gr. doses T. I. D. increased to 15 gr. on Oct. 20—to 20 gr. on Oct. 25th and 25 grs. on Oct. 29th to 30 grs.

Upon its being pointed out that the lesion seemed to implicate both sixth nerves, Dr. H. B. Anderson and Dr. Shuttleworth drew attention to the seeming impossibility of this occurring without affecting other nerves.

Dr. H. B. Anderson referred to a case of brain tumor in which similarly the symptoms had come on suddenly. There was intense headache, vomiting and dizziness. The external recti muscles were early affected. There was also evidence of involvement of the 3rd, 5th (motor and sensory) and hypoglossal. There was double optic neuritis followed by atrophy. The growth was evidently below the internal capsule, making pressure over the area from the 3rd back to the hypoglossal. Post-mortem revealed a syphilitic gumma.

The Chairman called attention to the relief of symptoms, particularly the optic neuritis which had been observed by Horsley after trephining.

Later History.—On November 8th, the patient was operated upon, a portion of occipital bone was removed with a trephine, and the dura mater was felt to be very tense, more especially on the right side. The skin flap was then loosely sutured with silk-worm gut, thus completing the first stage of the operation. Patient said he had not as much pain in the eyes as before the operation. On November 13th, the second stage of the operation was performed. The dura mater was incised. Brain tissue seemed abnormally soft. No tumor was located. After this stage of the operation he complained of pain in the occipital region and could not be restrained from pulling off the dressings on his head, thus getting the wound infected, and on November 20th died of septic meningitis, the temperature for the past two days being over 105 deg., and pulse over 130.

At autopsy over the right posterior part of the brain was seen a purulent discharge. On making sections of the brain there was found a diffuse glioma about the size of a hen's egg, involving both frontal lobes, but was much larger in the right frontal lobe than the left. The cerebral convolutions were flattened from pressure.

Gout.

Dr. Geo. Strathy, of the House Staff, presented a patient suffering from gout, giving the following notes:

Complaint.—1. Swelling, agonizing pain and tenderness on pressure in the joints. 2. Small joints of hands and feet stiff, irregularly enlarged and deformed. 3. Deposits of chalky lumps in and about the joints and along the tendons. 4. Bleeding piles. 5. Slight cough.

Duration.—Began 25 years ago; much worse during past five years.

Family History.—F. D., aged 68, gout; M. D., aged 65, dropsy; 2 B. L. and W. (although 1 B., aged 65, has lumbago); 3 S. L. and W. Father's father died of gout. No gout on mother's side.

Personal History.—Patient aged 55. Born in England, came to Canada 25 years ago and lived near Muskoka until one year ago, when he became a resident of Toronto. All his life he has been a clerk at indoor work, leading a sedentery life

and getting very little active bodily exercise. For the past four years he has been unable to do any work. He has never been exposed to lead poisoning. He claims to have been always a very moderate eater as to amount, but has been accustomed to having meat three times a day. He uses three cups of tea per meal, smokes one ten-cent package tobacco per week, has not chewed tobacco for the last year, but all his life has indulged "not wisely, but too well," in fermented liquors, using as much as twelve dozen glasses of port wine or one dozen glasses of beer daily. He is not married.

Previous Illness.—Had no children's diseases. Age, 13. Typhoid fever lasting three months. Recovery complete. Age, 21, gonorrhea, lasting six weeks. Glands swollen, but no rash. No sore throat and falling out of hair. Recovery complete. Age, 30, rheumatism (?) Started suddenly one afternoon in right knee and remained in that joint for two weeks.

History of Present Illness.—Without any cause which the patient can assign, this trouble began 25 years ago, suddenly one afternoon, with severe pain in the right knee. The knee quickly swelled up to double its normal size, was very hot, tense and tender. During this attack, which lasted two weeks, the patient was restless, irritable and troubled greatly with dyspepsia. Two years later he had a similar attack, lasting one week, and the same knee alone was involved. One year later he had another recurrence, this time the metatarsophalangeal joint of the right big toe being involved. Next, his right ankle was affected. Then a similar process of involvement followed on the left side and accompanied by an attack of sciatica and lumbago.

The above conditions have been gradually growing worse, the attacks becoming more frequent and of longer duration.

Eight years ago his hand became involved, and the patient noticed little lumps like chalk appearing first in the first interphalangeal joint of the right hand, and then gradually coming in various places in and about the small joints of the hands and feet. These lumps break down and ulcerate, leaving a yellowish surface behind. Four years ago the hand became deformed. Two years ago these chalky lumps appeared in the helix of the ear. The larger joints have escaped so far.

The patient says he has been greatly benefited during the previous attacks by a prescription containing wine of colchicum, tincture of gentian and potassium iodide.

When the swelling subsides, after an acute attack, the skin desquamated. During an acute attack the patient suffers more

at night. Attacks now occur 3, 4, 5 times a year, and last from two days to two weeks, usually four days.

Present Condition.—Patient is very bright mentally, though suffering greatly. He is lying motionless in bed with his legs drawn up and all the joints flexed. He is unable to use his hands and feet on account of their stiffness and pain.

Height, 5 ft. 10¾ in., weight averages 175 lbs. (Patient says he loses about 15 lbs. with each acute attack.)

Development and nutrition, fair. Expression, anxious. Complexion, florid. Over the nose and malar bones the vessels are prominent. (Teliangectasis). Skin moist and somewhat cyanosed. Over the temporal region and sides of face is millet-seed sized papulo-vesicular eruption. There are tophi in the helix of the ear, alae nasi and along the tendons on the backs of the hands. There are two scars of old ulcers on the external surface of the right shin. Glands nowhere enlarged. Respiration is labored. Slight hacking cough. Temperature 101 3-5 deg. Muscles are very flabby.

Hands.—Markedly deformed. Flexed at metacarpo-phalangeal joints and also at the distal inter-phalangeal joints. Marked ulnar deflection. All the inter-phalangeal joints are ankylosed, and there are tophi on their exterior surfaces. The joints are swollen, hyperemic, glazed, tense, reddish-purple color, and vessels prominent. There are yellowish-white deposits on the exterior aspects which vary greatly in size. Joints are very tender.

On the second inter-phalangeal joint of the index finger of the left hand is a large yellow vesicle, the size of a five-cent piece, which is soft and tender. Smear from its contents shows pus cells and needle-shaped crystals of sodium biurate. The little finger of the left hand shows remnants of a similar lesion, which has ruptured, leaving a yellow, dried-up deposit behind. On the ring finger of the left hand is an ulcer, small, shallow and smooth, with a yellowish discharge, which leaves a white chalky deposit on the surrounding skin. Joints, toes, ankles, knees, elbows, show similar change to a much less marked degree than in the hand.

There is no pain in the sterno-clavicular joints and shoulders. Bones.—Nil. Eyes.—No burning or itching—no episcleral congestion. Sclerotics show jaundice. There is an arcus senilis.

Digestive System.—Subjective.—Appetite very poor. Bad

taste in mouth. Vomiting. No pain in stomach. Great thirst. No belching. Bowels free. Bleeding Piles, No sore throat.

Objective.—Teeth badly stained. Gums pale. Pyorrhea alveolaris present. Tongue coated. Breath offensive and heavy. High palate. Abdomen is full and there is some bulging in the flanks. On percussion there is a highly tympanitic note everywhere except in the flanks.

Stomach.—Greater curvature is two inches above umbilicus. No splashing.

Liver.—Upper border at the lower border fourth rib. Lower border at the costal margin (in the mammary line).

Spleen.—Not palpable.

Circulatory System.—Subjective.—Shortness of breath. Swelling of ankles. No palpitation nor precordial pain.

Objective.—Pulse 100 per min., rhythm regular. Vessel walls sclerosed. Tension, high. Volume only fair. Force, good. Rise and fall abrupt, and maintenance not well sustained.

Heart.—Inspection.—Apex beat not visible. No bulging.

Palpation.—Apex beat, a mere flicker in the fifth interspace four inches from middle line. No thrills.

Percussion.—Right border ½ in. external to the right border of the sternum in the fourth interspace. Left border ¼ in. outside nipple line. Apex in nipple line in fifth interspace.

Auscultation.—The heart sounds are very faint and indistinct. First sound is weak and the second aortic sound is accentuated. No adventitious sounds. No murmurs.

Blood Examination.—Feb. 7, 1907. R. B. C., 4,500,000; Hbg., 70 per cent.; W. B. C., 8,000.

Respiratory System.—Cough expectoration. Dyspnoea. No pain in chest. No night sweats.

Objective.—Inspection.—Barrel-shaped chest. Poor expansion. Abdominal type of breathing.

Palpation.—Expansion, poor. Vocal fremitus diminished.

Percussion.—Hyperresonance everywhere.

Auscultation.—Breath sounds are broncho-vesicular below that level. Rales and rhonchi present, but constantly changing positions.

Sputum Examination.—Amount, small. Color, greenish-yellow. Consistency, thick and tenacious (lumps of mucus). Stain used, carbol fuchsin and methyline blue. R. B. C., none. W. B. C., pus cells present. Epithelial cells, desquamated squamous. Crystals, no uric acid crystals. Bacteria, staphy-

loccus, streptococcus, diplococcus, rod-shaped bacillus. Spirals, none.

Genito-urinary System.—Subjective.—Frequency in micturition. No worse at night. No pain. Red sediment in urine which adhered to the chamber. Never passed any calculi.

Objective.—Kidneys, not palpable.

Urinalysis.—Transparent, light amber-colored urine, with light sediment of both brick dust (urates) and cayenne pepper (uric acid) deposit. Odor is strong. Specific gravity, 1012.

Reaction.—Faintly acid. Quantity in 24 hours not known.

Chemical.—Urea, 0.2. Albumen, none. Sugar, none. Bile, none. Phosphates, present. Urates, present. Chlorides, present.

Microscopical.—Epithelium, present. W. B. C., none. R. B. C., absent. Casts, absent. Made Feb. 7, 1907.

Crystals—(1) Uric Acid. (2) Oxalates.

Amorphous—(1) Urates. (2) Feathery Phosphates.

Nervous System.—Subjective.—Headache. Hot feet at night. Cramps in calf and abdominal muscles. Sweating.

Objective.—Patient is very intelligent, and is not suffering from hallucinations, delusions, nor torpor. His comprehension and utterance of speech is good. Memory, excellent. Attention, good. Sleep fair, when pain of joints does not keep him awake.

Motor Functions.—Voluntary power not much impaired. State of nutrition, fair. Irritability, all right. Reflexes, pupil normal. Knee, normal. Plantar, normal. Ankle clonus, absent. Babinski, absent. Co-ordination, nothing abnormal.

Sensory Functions.—Subjective. No numbness, tingling, formication nor abnormal sensation of heat and cold.

Objective.—Sensations of pain; touch, temperature, are normal.

Special Sense.—Sight, smell, taste and hearing normal. Cranial nerves all normal.

Selected Article.

THE MORE RECENT TREATMENT OF THE INSANE.

By G. H. Savage, M.D., F.R.C.P.,
Consulting Physician for, and Lecturer on, Mental Diseases, Guy's Hospital, London.

Gentlemen,—I have named my address for this afternoon "The More Recent Treatment of the Insane," because I am always protesting against treating insanity as an entity, as a definite disease. We have to consider the insane person, and the treatment of the insane differs very materially now from that of even a very few years ago. A history of the treatment of the past is almost an essential to an understanding of the stage which we have reached now. By the way, the recovery-rate is not much greater now than it was 100 or 150 years ago. That, of course, one regrets, and hopes for better things. The Biblical treatment of the long past was not unreasonable; the treatment of Saul by David was certainly correct; and as to the treatment of Nebuchadnezzar—turning him out into the country till he recovered—that was a case of non-restraint treatment effecting a cure. We have only come back to that even now. The next idea was that all insanity was associated with theological error, that, in fact, every insane person was afflicted by some spirit, generally a spirit of evil, but sometimes a prophetic spirit. Therefore the only way was to eject the spirit. Consequently chains, chastenings, and whips were used. Sometimes he had to be cast out by stinks, therefore remedies like asafetida, which is still used in the treatment of neuroses, were used for the ejection of the devil. There is still, in the centre of Europe, a cathedral and a town, and around it some fifteen villages, called Gheel, "The City of the Simple," where for seven hundred years the people have been treated at the shrine of Dymphna. Here I spent a week of great interest years ago. I suppose I am asked once a week whether there is any objection to a patient being treated by "Christian Science." thus coming back to the old thing. Hypnotism I am constantly being asked about, and I shall refer to that later. As society came more closely together, people said they must be protected against the accidents resulting from the insanity of certain people and, to effect that protection, the insane were shut up. Asylums grew, and are growing still. In the earlier days they were not specialized; all cases of all kinds, whether curable

or incurable, were lumped together. Now one of the great developments is the separation of them; so that there are not only idiot asylums, but idiots are being separated. Thus you find schools for feeble-minded and institutions and colonies for the weak-minded, who are not distinctly idiotic. And one of the developments which will have a very great influence in the future is hospitals for the insane. I have said to you before that there are two words which I should like to get rid of from the English language—"asylum" and "lunatic." It will take a hundred years, even after they have been abolished, to do away with the stigma; the old feeling that a person affected in his mind is therefore alien and must be shut off, so that a person suffering in his highest faculties is an outcast. And when one remembers that a very large proportion of these people get well, and a larger proportion than the public believes remain well for the rest of their lives, it is a shame that they should be treated as if they were altogether useless as soon as they have had one attack of mental disorder. In Glasgow—and we must admit that north of the Tweed they are in advance of us in many ways—they have now a receiving hospital, so that every person suffering from mental disorder who falls into the hands of the equivalent of the relieving officer or the police is sent to this hospital, not to an infirmary or an asylum straight away, unless he happens to be a typical general paralytic, or to have some incurable disease of that kind. There are two wards in this receiving hospital, and I spent a day there not long ago to see the types of cases, and to see the results. The result is that not more than half these cases go to an asylum at all, but are discharged. Drink is, of course, the cause in many of these cases, but not by any means the majority. I said to the superintendent that I supposed the acute alcoholics came back fairly frequently, but he said "No"—that their experience was that, short of a year, or even more, the treatment of an alcoholic for a month or six weeks in the hospital was as useful, in the long run, as asylum detention for two or three months. In fact, he said that unless an inebriate was going to be secluded for a year or two, the result of hospital treatment in bed, with strict supervision and dieting, and medicine to a certain extent, was as useful as prolonged treatment, and much more useful than simple detention for three or four months.

Another development is hospital asylums, of which type Bethlem is the oldest example. St. Luke's is another old institution. Scattered over the country there are establishments

like the Holloway Sanatorium. What salvation is in that word "sanatorium"! People do not mind going to Holloway Sanatorium, but if it were called the Holloway Asylum they would shy at it. In York there is a retreat, and similar institutions at Exeter, Gloucester and Manchester, and they are to a great extent self-supporting; some pay for their care, some pay but very little; but those who pay more help to support those who pay very little. At Bethlem Hospital the majority of patients pay nothing at all; a certain number pay two guineas a week; in some places patients are received for even a guinea a week. There is another development, which I feel particularly interested in, because when I was at Bethlem I revived it, that of voluntary boarders. At that time there was still permission for the Royal hospitals, such as Bethlem, to receive a certain number of patients suffering from mental disorder, as voluntary boarders. I had difficulties, and I had a struggle. The authorities said: "Well, but this man is of unsound mind; he has got delusions." "Yes." "Will you receive a voluntary boarder who has got delusions?" "Yes." "But he could be certified." "Yes, but that is exactly what I don't want. The man says, 'I am supposed to be of unsound mind. I do not think I am. I am quite willing to come into a hospital where I can be under observation, and where you will see that you are wrong and I am right.'" A person who has had an attack of mental disorder once or twice and has recovered, says, "Next time I get like this I shall prefer to return." I remember in the old days a patient driving to Bethlem Hospital and saying, "I want to be taken in; I feel I am going off my head; only if you take me in you will send word to my family where I am." At Bethlem Hospital there are probably twenty-five voluntary boarders; at Virginia Water there are a large number of voluntary patients, and one hopes it will be still further developed. You can understand that in county asylums it would be rather a dangerous thing to have voluntary boarders. The Commissioners quite properly require that those who wish to become voluntary boarders shall say in writing that they wish voluntarily to so place themselves; and there must be some statement by an outside medical man, preferably a general practitioner, that in his judgment the case is a fit and proper one. Over and over again this sort of thing occurs to me: A man comes and says, "I will kill myself." "Nonsense! You feel you will kill yourself?" "Yes, and I will." "Don't. It will be inconvenient for you, for your friends, and for me, now you have consulted me. I will telephone to see if they will receive you

at either of these institutions." Yes, they can receive him, and he goes. I send with him a note that I consider him a fit and proper person to go as a voluntary patient, and he goes. The wave of despair passes; he is treated medically, and is discharged recovered. The more people recognize that hospitals for mental disorder can be used like homes or like hospitals of another type, the more will be removed the current dread of those institutions. It is a great thing to feel that they are going there for treatment, not for detention; the great trouble felt by the insane is that they are no longer free agents.

The next improvement, again along Scotch lines, is boarding-out. They have a patient here and a patient there at small houses, people who have been acutely insane but have recovered up to a certain point. And we must remember that many surgical and medical cases have only partially recovered when they leave the hospital, but they may have at once to perform their social duties. One who has had acute insanity may be left lamed in mind; he may no longer be able to fill the position he did; he is weak-minded, but he may be perfectly harmless; he is the class of man who is a hewer of wood and a drawer of water in asylums. A large amount of work is done in asylums by chronic patients. Some of them are specialists; there was one in Bethlem who would do nothing but polish brass knobs, though he still believed himself to be the Holy Ghost. Boarding such people out enables them to live happier, freer, and less costly lives; and no doubt the practice is extending in England. In 1890 it was decided that there should be no more private asylums' licenses granted; consequently, the hospitals have grown, and are receiving large numbers of patients of a class who used to be sent to private asylums or to the cheaper asylums. Hundreds of people all over the Kingdom are asking to have patients. Nurses leave asylums, marry, and say they have a nice little house and can take a patient. Three thousand doctors have applied to me for patients, therefore there are a large number of patients living scattered about, I presume, and I fear there is great danger of abuse. The abuse which called lunacy legislation into being was largely the fact that, literally, people were living upon lunatics under their care; people farmed them. I am always maintaining that we do not so much want certification of the insane as notification of them. Let there be a notification of insanity when it reaches a certain line, just as there is a notificaton of fever. If a person is insane, but not dangerous to society, let it be known and the patient kept under some kind of supervision. Other-

wise, I feel sure there will be abuse. Certain so-called "colonies" I find very helpful; there are epileptic, feeble-minded, and inebriate colonies. I do not like to give names, but I will describe one. A doctor has a farm of 1,200 acres. On that he has ten or a dozen small villas, bungalows, cottages, and in each of these is a farm bailiff, a cured patient, a city missionary, a cured inebriate, a cured morphinomaniac, or someone else who has experienced mental trouble. In each of these houses are two or three borderland cases, who have fallen in some way, and are out of step with society, yet who are not dangerous or suicidal. These individuals are absorbed into this colony, and they are gradually educated back to self-respect; they are trusted. The doctor himself knows nothing about payment; that is arranged with the head of each house. The results are extraordinarily good. I had a letter from him this week, wishing I could go down and see the batch of discharges which he is sending to Canada, they having been there a couple of years and learnt many occupations, including, of course, agricultural ones. Of course, one has to recognize that there are failures, but who does not fail? Our successes are built up upon our failings. Therefore the future treatment of insane people, especially young, growing cases, is to put them in healthy conditions. Insanity is not a disease depending on a micro-organism, though it may in some cases spring from diseased states; but it is a want of relationship of the individual to his surroundings, and if you modify his surroundings you may often get him back to usefulness.

Now as to treatment. It seems to me we are always inclined to sway backwards and forwards. First, every lunatic must be shut up, and now the feeling among certain physicians seems to be that every lunatic ought to be sent travelling; and I have sometimes said that part of the Atlantic must be paved by these people. It is a very dangerous thing to send a person of unsound mind travelling unless you know all about him. Some time ago I was told a patient was to be sent for a voyage, and I said I was very glad I was not going with him. Next I heard that after being a short time at sea he attempted to drown himself. The consequence was that the rest of the voyage, which was to do him so much good, had to be passed in the cabin under the strictest supervision. Doctors have the common failing of recommending that which suits themselves. If a person has an inflamed eye he does not at once go to a picture gallery. He is put into a dark room, and is kept quiet. Melancholia, in many cases, is mental pain; and do you sup-

pose that when the mind is suffering painful impressions it is best to exercise it? It requires rest. One man finds rest at the sea-shore, another in pottering about a garden or on a farm. One man, who had an attack of melancholia which lasted a year, showed me a road he had made entirely, including quarrying the stone. He said, "That was my cure for melancholia." Doctors sometimes say, "Don't you think it will be a good thing to make him buck up?" I think it would be disastrous; but there are some to whom it would be immensely useful. A man makes a fortune before he is middle-aged, and he is induced to retire from business. He has devoted twenty-five years to making money, and thinking of nothing but money and the making of it. He retires; and he has not got a healthy vice at all. If you cannot get him back to some business, then if you send him for a year or two's travel he may gradually settle down into a different man. Travelling is useful in certain hypochondriacal cases. When insanity depends upon physical disease, treat that disease; do not treat the insanity, but treat the individual. Travelling has its advantages, but it also has grave dangers. I have seen many people made very much worse by travelling, and many cases have ended fatally as a result. Then comes the swing of the pendulum the other way. "You say hospital treatment for the insane is good; very well, give them all 'rest cures.'" If the patient is badly nourished, if his digestion is failing, if he be physically weak, Weir-Mitchell treatment may be of enormous advantage. But if the person be a self-indulgent adolescent, he or she must not be allowed to soak in self-indulgence; it would be the worst thing possible. Brooding leads to hatching, and brooding in bed leads to all sorts of delusions. I have seen a person put to bed slightly depressed, and get up confirmedly deluded. But in some cases it is beneficial, as in the following case which recently came before me. I was asked whether a certain lady would not be benefited by a "rest-cure" in a nursing home. First, one had to decide: Is that person really insane, dangerously, so that it is not justifiable to send her to a nursing home? No. She was hypochondriacal, quarrelsome, and inclined to upset the household generally, wherever she was. She was about 2½ st. below her normal weight. She was put into a nursing home, isolated from her friends. Nurse No. 1 does not get on with her; Nurse No. 2 did very well. There are the surroundings of peace; she is not seen much by a doctor, nurses look after her chiefly, and massage is increased. She puts on 2½ st., and even more, and begins to think she

is going to become too fat. But she is inclined to say, "I am so happy here that I will stop here." Now comes the time to break down adhesions, and therefore one tells her to go somewhere else. She is sent to the home of a cultured lady who has had experience of such cases, and slowly she gets perfectly well. If she had had her way she would have gone on having "rest cures" for the remainder of her life. I have known a patient drift into that condition and not leave her room for twenty years; she liked the habit of living in retreat. One use of the Nursing Home is: You are called suddenly to see a woman who has become insane. Pending a decision as to the future, it is extremely convenient to be able to say: "Yes, the doctor thinks that a rest would be good for you, therefore you must go to bed, and you must have a nurse." That, of course, is watching to see which way the current is going to run.

Next, as to treatment by drugs. Nowadays people are apt to disparage drugs and drug treatment, but there is no doubt they are useful in some cases of mental disorder. They may prevent, or may shorten, a breakdown, or they may alleviate it in some way. I remember the day when patients were kept quiet by antimony and purges. That is no better than mechanical restraint; we have got past chains, sudden baths, shower-baths, and electricity. But it is important to remember that purges may be essential. I have known a person freed of his delusions by a very copious action of the bowels. You may need to purge so that you may be sure you are starting fairly. And in regard to sedatives, there seems to prevail a sort of healthy dread. In regard to half the patients I see in consultation the doctor says he is not giving anything to induce sleep. That may be right in principle, but no principle is right if you dogmatize on it too absolutely. If you have a patient suffering from sleeplessness, it is your duty to procure him sleep somehow. Nowadays the latest drug is always the best—veronal, or trional. Paraldehyde is the nastiest, and, therefore, in many cases, the best. Both bromide and chloral are given less than they were. After the diet, see that the patient does not take so much tea and coffee. If the patient has his last meal at 6 or 7 and goes to bed at 10.30, it is well to give a little hot soup, or something of the sort, with a little stimulant in it. Sleeplessness, especially in old age, is frequently relieved by stimulants.

Baths at one time were much used, and in two or three ways. The old brutal method was the "surprise bath," intended more as a punitive than as a therapeutic measure. In some cases,

especially adolescents, a warm or hot bath, with a cold effusion to the head and neck, is useful; and very violent patients have derived much benefit from the prolonged bath, which can be readily arranged in any house. At Bethlem I have kept patients in such a bath eight or nine hours, and they frequently calm down quickly, when everything else has failed. In cases of chronic sleeplessness, it is good to add to the hot bath ¼ lb. of mustard to which has been poured a quart of boiling water, first letting it stand for ten minutes. Turkish baths are sometimes useful.

I have no experience of the subcutaneous injection of saline fluids.

Finally, I may say, I never, or very rarely, neglect to reason with my patients. (Dr. Savage gave instances of good results from this.) As to hypnotism, that is a subject large enough for a separate lecture. But hypnotism would do harm in patients who are emotional and already too sensitive. However, it is often successful in inducing sleep in those who badly need it. Sometimes delusions are shifted by hypnotic suggestion. Society is very much alert on the subject of prophylaxis, but we have not got so far as our American friends, and I do not think we ever shall: "Although it is desirable for the good of the community that only individuals who are mentally sound should propagate their kind, it is scarcely to be expected that the passage of laws similar to the one in Minnesota will in any degree do away with the possibility of marriages, even amongst those who are mentally defective. Hence we are left with only two methods by which these doctrines can be met, namely, ample provision for the poor unfortunates in institutions, or, if they be left at large, castration."—*Medical Press and Circular.*

Progress of Medical Science.

MEDICINE.

IN CHARGE OF W. H. B. AIKINS, H. J. HAMILTON, C. J. COPP, F. A. CLARKSON AND BREFNEY O'REILLY.

Solomon's Test in the Diagnosis of Gastric Carcinoma.

Solomon's technique is simple. The patient is placed on an exclusively milk diet until mid-day. In the afternoon he receives liquid nourishment without albumen. Late in the evening he receives an abundant lavage of the stomach, until the water issues perfectly limpid. During the night no nourishment is given. The following morning the stomach is washed with 100 cc. of physiological solution of chloride of sodium. In the lavage liquid a search is made for albumen. According to Solomon, albumen is found in gastric carcinoma in varying quantities (from 1-10 to 1-2 gr. per 1000). This albumen comes from the serum which transudes from the surface of the tumor. Romano and Reicher have found, from their own investigations, frequent causes of error in Solomon's test,—these causes are due to the presence of mucus in the lavage water. Further, the results may be of little importance owing to considerable contraction of the stomach, which makes a perfect lavage almost impossible. Moreover, the same investigators assert that the test would be positive only in those cases in which there is an ulcerative process in the stomach; that it would never give an early diagnosis of carcinoma; and that it would not indicate the nature of the ulceration. According to *Mongour* (Semaine Med., 1906, No. 8), the albumen comes from the sanguineous exudate which occurs the gastric ulceration.—Translated from *Giornale Internazionale delle Scienzo Mediche*, by HARLEY SMITH.

Absence of the Thyroid Sign in Obstinate Forms of Acute Rheumatism.

Vincent states that in 74 cases of acute rheumatism, he has observed the thyroid sign, namely, swelling, and pain on pressure of the thyroid body. In a certain number of cases, in which the evolution has been slow and the treatment difficult, he has not found the thyroid sign. In those cases, however, in which, notwithstanding the intensity of the symptoms, the

treatment gives good results, he has found the glandular swelling persist through the acute period, diminish when improvement takes place, re-appear when the rheumatism signs return. Vincent is led, accordingly, to believe that the thyroid body plays an important part in the defence of the organism against the rheumatic process. This, also, would explain the usefulness of the iodine and the iodides in obstinate forms of rheumatism. —Translated from *Giornale Internazionale delle Scienzo Mediche.*

Acute Heart Failure and its Treatment.

The various etiological aspects of acute cardiac failure may be classed according to Charles Bolton in two groups: (1) It may be due to some organic condition affecting the heart, the blood, or the blood-vessels; (2) or it may result from nervous disturbance, as in sudden death from vagus inhibition or in tachycardia. In the first group the trouble is mainly mechanical, and arises from interference either with the systolic or force-pump function. The failure of the systolic function may be due to excessive resistance to the blood output into the pulmonary or the systematic circuit; for instance, to acute Bright's disease, or to acute pulmonary engorgements, such as that sometimes produced, according to Kronecker, by the diminished barometric pressure of high altitudes. Or it may be due to any of the multiple causes which lead to impairment of the muscular power of the myocardium, whether toxemic, ischemic, or by implication of the auriculo ventricular bundle of His. On the other hand, the failure of the diastolic function may be of two kinds: there may be excessive filling or, on the contrary, deficient filling of the cardiac cavities.—*Progressive Medicine,* Sept., 1907.

The Use of Digitalis in Valvular Diseases.

E. H. Colbeck's conception of the value of digitalis is based upon his belief that it raises the cardiac tonus still more than that of the arteries, and in proportion to any hypertrophy of the myocardium—provided the latter has remained free from degeneration, as may be assumed to be the case in the younger subjects. This guides him in the administration of digitalis in aortic incompetence. As to the magnitude of the pressure that is exerted by the arterial recoil, it has been shown in animals that if the aortic valve be suddenly rendered incompetent the aortic pressure is sufficient to produce aneurysm, or

even rupture of the wall of the unprepared heart. In the ordinary clinical case the stress is gradual, and the fibre is educated to an increased tonus; but when subsequently accidental overstrain occurs digitalis should be invaluable for the purpose of restoring the vigor of the heart. The simultaneous action of the drug on the right side of the heart is not without influence in the restoration of compensation. In practice, then, it may be inferred that digitalis should seldom, if ever, be given in cases of aortic regurgitation which have developed during or after middle life, since the ventricular wall is seldom perfectly sound.

In *aortic stenosis* digitalis is contra-indicated apart from the occurrence of cardiac failure. In this lesion an augmentation of the tonus of the heart and peripheral vessels could but increase the work with which the left ventricle has to contend.

In *mitral incompetence* beneficial results are invariably obtained from the administration of digitalis. On the left side of the heart a rise of tonus and consequential hypertrophy enable the right ventricle to cope with the increased resistance in the pulmonic circuit, and by maintaining the blood pressure in the pulmonary veins and left auricle it resists the reflux through the mitral opening and ensures an adequate supply of blood to the left side of the heart. A rise of tonus in the arterioles and capillaries would no doubt greatly minimize the disturbance in the systematic circuit due to this cause, though the increased resistance to the discharge of the ventricular contents would augment the reflux through the mitral opening.

In *uncomplicated mitral stenosis* the supply of the blood to the systemic circulation tends to become increasingly restricted. A rise in the tonus of the left ventricle and peripheral vessels would still further diminish the charge of blood delivered to the aorta. No doubt the effect of increased cardiac tonus on the right side of the heart would be of benefit provided the blood supply to the left ventricle could be thereby augmented. It may be inferred, therefore, that digitalis can be of no benefit to mitral stenosis in the absence of failure of the right ventricle, and in this event, so soon as the pulmonary blood pressure has been raised to the point at which the maximum charge of blood is delivered to the left ventricle, the drug would again act prejudicially.—*Progressive Medicine,* Sept. 1, 1907.

LARYNGOLOGY AND RHINOLOGY.

IN CHARGE OF J. PRICE-BROWN.

A Case of Closed Sinusitis of the Ethmoid Labyrinth, with Exophthalmos. Harry Kahn and Mortimer Frank, *Laryngoscope,* September, 1907.

The patient, a girl of fourteen years, had passed through attacks of nearly all the usual exanthemas. On recovering from chicken-pox, a protrusion of the left eye occurred, becoming gradually more pronounced. There was no headache, no hydrorrhea, no parosmia, no pharyngeal nor laryngeal irritation. The only apparent indication being the pushing of the globe of the eye outwards and forwards.

On rhinoscopic examination the septum was seen to be straight, but a large tumor-like mass, polypoid in character, was found to occupy the position of the normal anterior end of the left middle turbinal, filling the whole of the olfactory space.

On application of cocaine and adrenalin, the mass remained immovable and hard, and there was no pus visible. On resection of the growth, a large volume of white odorless pus escaped, which continued from day to day up to the time of the report of the case, a month later. The ethmoid at the time was cleaned out as fully as possible, and free drainage obtained. The discharge is gradually decreasing, and the protuberant eye returning to its normal place in a satisfactory manner.

That the treatment followed is the appropriate one is borne out by the fact that in the *Medical Record,* Vol. 70, page 689, Fish reports five cases of enucleation of the eye in patients suffering from closed ethmoid sinusitis. And the writers close with the words: "Warning should be taken by the ophthalmologist not to enucleate an eye of this type without first looking into the nasal condition."

The Alveolar Route of Operating Upon the Maxillary Sinus. —Melville Black, *Laryngoscope,* September, 1907.

This article strongly advocates operation through the alveolus as the primary method of treatment in chronic antral disease. He insists that to be effectual, the opening should be large, with an all-round diameter of three-eighths of an inch. He makes the first opening with a quarter-inch trephine and then enlarges it with a burr.

After thoroughly curetting and washing out through the artificial opening, a saddle bridge, made of rubber or one of the finer metals, is adjusted. This can be easily removed and replaced by the patient as required for cleansing purposes. When an artificial plate is worn, covering the part, no other plate is needed.

The treatment consists of first curetting and washing; and subsequently, in addition to the latter, cauterizing the whole of the lining membrane of the antrum, with pure carbolic acid, applied by means of bent cotton-carriers—the effect being immediately neutralized by syringing the antrum with alcohol. This carbolic treatment is repeated once a week. When the artificial opening closes before healing is complete, it is enlarged, under cocaine, by a cataract knife. The rimming out is easily accomplished, and the treatment resumed. The cases usually get completely well in from six weeks to four months; and there is rarely a recurrence. If such a thing should happen, the old cicatrix can readily be reopened and the treatment repeated.

A Case of Sarcoma of the Maxillary Sinus.—F. L. Rogers, *Laryngoscope,* Oct., 1907.

This case was exhibited to show the condition of the growth after seven months of active treatment.

The patient in early life had syphilis, resulting in destruction of the septum. Many years later, when he presented himself for treatment for swelling of the left upper jaw, a perforation was made through the nose, expecting empyema of the antrum, but nothing was found. Later on, an opening was made through the canine fossa, exposing a growth attached to the anterior wall of the antrum, which so crowded the inner wall of the sinus and the inferior orbital plate, as largely to destroy these bodies. A considerable portion of the growth protruded into both nasal and orbital cavities.

The tumor was removed with the curette as completely as possible. Two months later recurrence took place, followed by very rapid growth. Later on, it was decided to remove the superior maxillary bone, and the operation was commenced. But such extensive destruction of tissue was met with that the operation was abandoned, and the cavity being cleansed out as thoroughly as possible instead. Some weeks later the odor became exceedingly offensive, and various kinds of treatment were resorted to, to mitigate the conditions. Among others,

methylene blue, combined with quinine and belladonna, were taken for several months; X-Ray was used, with the effect of destroying the unpleasant odor, but without checking the progress of the disease; the Finsen light was also applied, aiding, the writer believes, in producing an abscess where trypsin had been injected. Latterly, undiluted injecteo-trypsini was injected into the cheek opening, with seemingly better effect than anything else in checking the progress of this growth and removing fetor. For a month or so, prior to exhibiting the case, there had been no apparent enlargement, and no malodor, the reporter believing that there was even diminution in size.

Several times when the growth has encroached upon the mouth, interfering with mastication and deglutition, portions have been removed to give relief; but each has been followed by very marked and rapid increase.

The operator asked for further light, but received none.

Primary Melanosis of the Palate: Buccal Fistula of Recent Sarcomatous Origin.—J. N. Roy, *Montreal Medical Journal.* Nov., 1907.

This is an exceedingly interesting case on account of its rarity, the writer having found only two similar cases on record. The patient, a blacksmith, when 23 years old, injured his palate somewhat with the stem of a clay pipe. One year later he discovered, in the median raphe of the vault, a small, round spot, three millimetres in diameter. During the following twelve years this spot increased in diameter to about six millimetres. The only symptoms was slight roughness to the tongue on pressure. About this time iodine was applied, and pain commenced to appear, with gradual extension of the pigmentation to the surrounding parts, and dark masses, with a hemorrhagic tendency, began to show themselves. Four years later, all the space within the dental arch of the superior maxilla was filled with melanotic granulations. At the end of another four years, together with the melanotic granulations, depression of the palate occurred, chiefly on the left side, a naso-buccal fistula having formed. This was attended by neither hemorrhage nor suppuration.

Examination now revealed melanosis of the entire hard palate. Granulations of brown or blackish color were scattered all over, the left side being greatly depressed. At a point between the middle and posterior thirds of the hard palate a probe passed readily into the nasal cavity.

There was no dysphagia, but the voice was nasal, and the pharyngeal reflexes absent.

Macroscopic, together with microscopic examinations, led to a diagnosis of melanotic sarcoma, resembling melanotic endothelioma; and as the patient positively refused operative measures, the necessary mutilation, together with possible complications and doubtful prognosis, being explained to him, the case was allowed to progress under resorcin and hygienic treatment, the fatal issue being still delayed.

The writer concludes: "I should like to remark how unusual this case is, presenting a primary melanosis of the palate, without co-existing lesions of the eye or skin, a slow evolution of twenty years, and a recent rapid sarcomatous growth."

Epithelioma of the Larynx: Removal by Thyrotomy; No Recurrence after three and a half Years.—Henry L. Swain (New Haven), *Journal of Laryngology,* September, 1907.

This was the case of a clergyman, aged forty-seven, who had been complaining of hoarseness for six months. Examination revealed a white papillomatous mass growing from the upper aspect of the left cord, and apparently growing out of the cavity. Nearly the entire cord was covered by the growth. Some time later the whole visible mass was removed in small pieces intra-laryngeally. It was very friable. Microscopical evidence was negative. Two months later recurrence took place, and again the mass was removed. During the next two months the operation was repeated five times.

Six months after the first examination it was decided to operate more radically.

Thyrotomy and resection were then done after the usual modern methods. This time microscopical examination revealed the growth to be epithelioma. Recovery was rather slow but satisfactory. A fairly good vocal band has reformed, and after the lapse of three and a half years there has been no further recurrence.

Non-Recurrent Carcinoma of the Larynx Removed Through the Natural Passages. Fletcher Ingals (Chicago), *Journal of Laryngology,* September, 1907.

A laborer, aged forty-four, after being hoarse for six years, presented himself for treatment. For three weeks he had complained of pain in the region of the left half of the thyroid. No dyspnea, but almost voiceless.

Examination revealed a pinkish-gray tumor involving the anterior five-sixths of the left vocal cord, filling the ventricular opening and obstructing the glottis. The growth had the appearance of malignancy. The greater part was removed at the first sitting. Three days later more fragments were removed. Microscopical examination was made with the report that the neoplasm was a slowly-growing carcinoma, with keratohyaline transformation of the epithelial cells. Several other growths were removed in a similar manner from the region of the left cord, at varying intervals. Subsequently, sedative measures were carried out for several months, with gradual improvement of the patient's condition. Finally, after a year's interval, the voice was found to be normal and the larynx well. The conclusion is drawn that in certain cases of carcinoma of the larynx, it is better to try endo-laryngeal methods, before resorting to the more formidable operation of laryngectomy.

OPHTHALMOLOGY AND OTOLOGY.

IN CHARGE OF J. T. DUNCAN.

In the *Therapeutic Gazette* is an excellent symposium on Iritis. The first article is by Burton Chance, on "Iritis in General Disease."

As might be expected, those diseases dependent upon the evolution of micro-organisms within the body are likely to produce disorders in such highly vascular structures as the iris and ciliary body; consequently we may assume that all cases of iritis and iridocyclitis, not dependent upon traumatisms, have as their causative basis a general toxemia.

1st. *Syphilis.*—Iritis is seen both in *hereditary* and *acquired* syphilis.

(*a*) Hereditary. In this it is seen during the first two years of life, at about six years of age, and occasionally it manifests itself for the first time in late adolescence. In these later groups it may occur alone or along with interstitial keratitis. One or both eyes may be attacked. Attacks of iritis in infants and children if not traumatic are almost invariably due to inherited syphilis.

(*b*) Acquired Syphilis. In acquired syphilis, iritis, or iridocyclitis, may be met with at two periods, either within a year after the infection, or at a much later time. It generally de-

velops as a plastic inflammation, or as one which is accompanied by the formation of gummata. Usually it occurs at the time of definite general manifestations, and until these signs accompany it, it is difficult to decide upon a correct diagnosis as to the causation. At the outset the inflammation is limited to one eye. At times one meets with iritis in the tertiary stage of syphilis ten or fifteen years after the original infection.

Rheumatism.—Iritis may develop in the rheumatic; nevertheless it is rare in rheumatism.

Gonorrhoea.—Frequently, when iritis attacks young men who have had gonorrhœa, with indeterminate rheumatic symptoms, the arthritis is an infectious process capable of permeating the system; and the cause of the iritis is believed to be the gonococcic material. We find in some cases a distinct connection between the general disease and the iritis.

Gout.—It is doubtful whether iritis develops in true gout. He hesitates to classify as gout those irregular cases of so-called uric acid diatheses. Nevertheless, competent observers have declared that iritis does occur in gout; but before accepting this dictum as final we must exclude rheumatism, gonorrhœa and syphilis as other probable causes.

Tuberculosis.—Iritis in tuberculosis is less rare than it was once thought to be. It is found in scrofulous children and in adolescents with enlarged lymph glands, who may or may not have demonstrable tuberculous deposits in their lungs.

Acute Infectious Diseases.—Iritis may occur in the course of the acute infectious and exanthematous diseases. It has been seen in typhoid fever. I noted it in a goodly number of smallpox patients, and also in others suffering from epidemic cerebrospinal meningitis.

Malaria.—I have known sailors who have had malaria while in the East, and others who resided years ago in the malarious districts of this country, to have iritis, which has recurred and recurred until after a prolonged antimalarious course had been followed out.

He also holds that in meningitis, pyæmia and diabetes iritis is seen.

After an article on the Symptomatology, by Risley, the treatment is spoken of by Ziegler, under the headings:—1, Local; 2, Systemic, and 3, Surgical.

I. *Local Measures.*—The local treatment of plastic iritis (rheumatic, spongy, and syphilitic) has for its keystone the prompt and effective use of a mydriatic. Atropine sulphate gr. iv to f ʒ j should be instilled until the pupil dilates widely. If

synechiæ have already formed they will probably break loose.

Some patients have an idiosyncracy against atropine, and in these cases hyoscyamine sulphate may be used.

The supra-orbital neuralgia is usually nocturnal in its manifestation, and may often be relieved by belladonna spread over the eyebrow and covered by dry heat. A more modern analgesic, however, is found in hyoscine hydrobromate, which I have often used with almost magical effect, when instilled in the strength of gr. 1-4 to f℥j.

In addition to the mydriatic, hot stupes are most valuable to relieve the pain, congestion and sluggish circulation. A towel should be wrung out in hot water (kept hot) and held to the eye from ten to thirty minutes three times a day. This application encourages rapid absorption and increases the action of the mydriatic.

Leeching is absolutely necessary, in many cases, to relieve the overloaded blood-vessels and lymphatics, especially where the congestion creates a muddy-colored iris. As soon as this depleting effect manifests itself the action of the mydriatic is greatly enhanced, and the "brow-pain" and weight in the eye begin to disappear.

While we no longer confine these patients in a darkened room, it is well to have them wear an eye-shade, or "London smoke" glasses, as the admission of too much light is both dazzling and painful to the afflicted eye.

II. *Systemic Treatment.*—Internally, calomel is our sheet-anchor, particularly in the early stages. I usually order gr. 1-4 four times a day for five days, and if the symptoms are still marked, repeat the dose for a second period of five days.

Later, if antisyphilitic treatment is indicated, daily inunctions of unguentum hydrarg. ℥j are ordered, and ascending doses of potassium iodide, ranging from gr. v to gr. c (well diluted) t. i. d., are given for a considerable period of time (six months to two years).

If the rheumatic tendency is more pronounced, sodium salicylate, aspirin, or salacetin may be administered liberally.

Serious iritis or iridocyclitis runs a more chronic course, and does not yield to treatment so readily. Atropine must be used with great caution, as glaucomatous symptoms may develop at any moment, when eserine would be indicated. Calomel, salicylate of soda, and turpentine may be used singly, seriatim, or conjointly.

In traumatic iritis heat is contraindicated, and cold compresses constantly applied (day and night) are most efficient. Calomel

gr. 1/10 every hour or two hours is valuable. Atropine is generally indicated.

III. *Surgical Procedures.*—In chronic iritis, or in the recurrent form, if marked posterior synechiæ or pupilary exclusion are present, iridectomy is often indicated.

In conclusion I may repeat: iritis occurs in such protean forms, and is so manifestly hybrid in its types, that the treatment must be based upon the essential elements in the symptom-complex exhibited in each individual case. The prognosis is generally good.

Prevention of Deafness.

By far the greater number of diseases which affect hearing owe their origin to a pathological condition in the nose or throat, the point of entry being the eustachian tube. A comparatively small number arise externally from the auricular canal, such as impactions of wax, eczema and furunculosis of the canal, foreign bodies, traumatism, etc., but the majority of these do not offer serious menace to the organ of hearing. Even in these cases, however, care should be exercised. Rupture of the drum from excessive force in syringing for cerumen or from inexperienced efforts to remove a foreign body may be responsible for subsequent deafness.

The toothpick nor the hairpin should ever be employed to relieve an itching ear, as injury is frequently thus done. Suppurative inflammation of the ear should be promptly relieved by incision, thereby preventing many cases of deafness. Nasopharyngeal catarrh, being an important factor in the development of ear disease and consequent impairment of hearing, is the more important factor on account of its frequency, and should, therefore, be treated with the care and perseverance that its importance demands.

Subjective noises in the ear is another late symptom which first attracts the attention of the patient. Many of such patients consult the aurist only after the disease has made such headway that cure is out of the question, whereas in the early stage it could have been arrested and much benefit attained.

Editorials.

RE-ORGANIZATION OF THE TORONTO GENERAL HOSPITAL.

We publish in this issue the interim report on the re-organization prepared by a committee appointed by the Board, Nov. 7th, 1906.

It has been finally decided that for the present there shall be three co-ordinate sections in Medicine; three in Surgery; one in Obstetrics; one in Gynæcology; one in Ophthalmology; and one in Rhinology, Otology and Laryngology. In making the division as to the "Eye and Ear" Department, the most modern custom has been adopted, that is, there is a separate service for the eye and another for the nose, throat and ear.

The Board, however, reserves the right to change this system if it be deemed advisable at any future time. The age limit will be 55 for heads in Surgery, Obstetrics, and Gynæcology, Otology and Ophthalmology, and 60 for heads in Medicine. The term limits for heads will be 10 years, which may in individual cases be extended to 15 years for special reasons. These term limits will apply only from dates of appointments under the present regulations. The heads of all services may be specialists in their departments as a rule, but specialists may combine eye and ear treatment, and gynæcologists may do general surgery in their work outside the Hospital.

The Hospital and the University authorities have reached a very important position from a scientific standpoint.

There will in the near future be established in the Hospital two new departments, one of Pathology and Bacteriology, and another of Pathological Chemistry, each in charge of a professor appointed and paid by the University.

We also publish an important letter from one who has given much attention to the subject of hospital management for many years. We believe, too, that he voices the opinions of the majority of physicians of Toronto outside the University Staff. Without attempting to discuss in detail "General Practition-

er's" communication, we desire to express the opinion, which we have always held, that non-school men should have representation on the General Hospital Staff. At the same time we don't agree with our correspondent that the outside representation should be equal to that of the school men, as such proportion has not been the custom at any time in the past. In addition, we may say to our correspondent that there are not now enough beds for six services in Medicine and six in Surgery.

BRIDGE WHIST.

The Bridge Whist craze is perhaps the strangest growth of modern times. Anne Rittenhouse thus speaks of what may be termed a disease in the United States (*Broadway Magazine*):

"We are Bridge mad! We live it and eat it. We sleep, talk and worship nothing but Bridge. Our dinners are shortened that we may hasten to Bridge. We play it in town and country, in the mountains and at the seashore; we play it in season for excitement, and out of season for recreation. We even carry it into the sanitariums, where worn-out nerves cry enough, and play it on our pillows. It would almost seem that in the course of time the fashionable funeral will not be complete unless Bridge tables are set out during the cermony. Is Bridge immoral? Yes, and again yes!"

Of course a game of Bridge is not necessarily immoral, but gambling for high stakes, no matter what game may be played, always leads to a certain amount of immorality and dishonesty. From the physician's standpoint, the question of immorality is not the main issue. We have to consider especially the effects upon health. The game has a wondrous fascination, especially for women who are nervous, emotional and fond of excitement. The high tension produced by continuous playing for many hours at a time, frequently morning, noon and night, wears out the nerves. Typical Bridge hysteria is one of the most serious forms of modern neurasthenia.

The victim often seeks a cure in health resorts, fashionable springs, baths, etc., but the deadly game is always with her

and she steadily goes from bad to worse, until the intelligent physician can readily make out the diagnosis. Her haggard face and general symptoms of nerve break-down tell plainly the story of physical ruin. In some instances the first symptoms are disorders of the temper. "Is your wife a Bridge fiend?" the society man was asked. "Well, I wouldn't say so much as that, but I might call her a Bridge vixen."

The physician can seldom do much in the early stages of the disease, but he should put forth his best endeavors, even though in a large proportion of cases his good advice be treated with scant respect. In all cases, but especially in the latter stages, the first part of his prescription should be—absolutely no more Bridge.

IS MOTOR SPEECH LOCALIZED IN BROCA'S CONVOLUTION.

From time to time during the last year, Professor Marie of Paris has published a series of articles attacking the orthodox theory of the speech centre in Broca's convolution. He has been able to study a great number of cases of aphasia, and to follow fifty of them to autopsy, with the result that he now states most emphatically that the whole theory of cerebral localization of speech rests entirely upon schematic construction.

In every case of aphasia, says Marie, there exists a more or less marked impairment of the power to understand spoken language, sometimes difficult for the examiner to appreciate, but still always present. No aphasic can, for example, execute perfectly the following order:—"From the three pieces of paper of unequal size lying on the table give me the largest, crumple up the middle-sized one and throw it on the floor, and put the smallest in your pocket."

The failure to perform this order is not due to word-deafness, for the patient cannot do it, even after someone shows him the actions required; but is due to a marked impairment of intellectual power, which, Marie thinks, always accompanies aphasia. The aphasic musician, for instance, can no longer read music, or play from memory pieces that were once familiar.

The main arguments against the localization of motor speech in the left third frontal convolution are two in number:— (1) Cases have been observed in which Broca's convolution was destroyed without any aphasic disturbances. (2) Typical cases of motor aphasia have come to autopsy, in which the convolution in question was absolutely intact.

It is quite true that the larger number of cases of aphasia coincide with a lesion of Broca's convolution, but there still remains the question of proper interpretation. The softening of the convolution arises from a thrombus in, or obliteration of, the Sylvian artery, but this cortical lesion is only an incident in the general havoc arising from the damaged blood-vessel, and must be regarded as an extension of the main focus, situated more posteriorly.

Marie has done some valuable work in the study of the blood supply to the cerebral region under discussion, and finds that the point of origin of the branch supplying the third frontal convolution is by no means constant. It may arise from the main trunk of the Sylvian artery at some distance from its point of bifurcation; or it may branch off at the very place where the bifurcation occurs; or, lastly, it may arise beyond the division. It is, therefore, easy to understand why the third frontal convolution may be softened and the other parts escape. Probably this is what occurs in those cases already noted with a lesion and no aphasic symptoms.

He has also taken the trouble to re-investigate the two cases upon which Broca established his theory, both brains being in the Musée Dupuytren, in an excellent state of preservation. He is disappointed to find that in the first case the softening not only involved the convolution that passed into medical history, but also the lower half of the Rolandic area and the greater part of the supramarginal and first temporal gyri. Furthermore, no section was made into the brain.

And so, putting all these facts together, one must conclude that the whole doctrine of motor speech localization is very inexact and most probably erroneous, resting on an uncertain basis of facts inaccurately observed and falsely interpreted.

OVARIAN PREGNANCY.

This interesting subject came up for discussion at the November meeting of the Section in Surgery of the Academy of Medicine, Toronto, in connection with an interesting case reported by Dr. Primrose and Dr. Hunt, in which an alarming hemorrhage took place from the ovary. The possibility of ovarian pregnancy was suggested, and in the discussion which followed some of the Fellows stated that they did not believe that ovarian pregnancy ever occurred. But it is well known and generally accepted that ovarian pregnancy has occurred, and, therefore, is possible. Cases have been reported by Koumer, Catharine Van Tussenbroek, Thompson, Mendes de Leon, Holleman, and more lately by Freundand Homé.

On Jan. 12th, 1901, before the Obstetrical Society of London, the subject was thoroughly discussed by Mr. Bland-Sutton, Dr. Galabin and others, and Mr. Bland-Sutton presented microscopic sections obtained during a recent visit of his to Amsterdam, by the courtesy of Dr. Catharine Van Tussenbroek. Dr. Van Tussenbroek's case was a celebrated one, and, as Dr. Galabin said, the Obstetrical Society was to be congratulated that this much-controverted question might be considered finally settled, since Mr. Bland-Sutton, who had taken so much trouble to assure himself about Dr. Van Tussenbroek's case, was converted.

Another recent discussion of the same question was that before the Glasgow Obstetrical and Gynæcological Society on May 23rd, 1906, when a case of ovarian pregnancy was described, with lantern and microscopic demonstration, by the President, Dr. Keely, and Dr. A. Louise McIlroy. On this occasion, Dr. Munro-Kerr referred to a similar case of his own, not yet fully published, and stated his belief that these cases of ovarian pregnancy proved the foetal origin of the syncytium, and also cleared up many points on the unbedding of the ovum.

It is some two hundred years at least since belief in ovarian pregnancy was clearly stated, but we had no positive proof of it until the modern cases cited above were thoroughly examined and accepted.

RECOMMENDATIONS OF THE COMMITTEE OF THE BOARD OF TRUSTEES OF THE TORONTO GENERAL HOSPITAL ON STAFF REORGANIZATION.

In making appointments to the Visiting Staff the Board of Trustees shall regard especially the previous training and record of the applicant, his capacity to render service to the sick in the Hospital, his scientific attainments, his teaching capacity and the promise he gives for future work.

All appointments shall be made annually.

There shall be no remuneration to members of the Visiting Staff.

In making appointments to the Staff sex shall be no bar.

The members of the Visiting Staff shall not be allowed to serve on the Staff of any other General Hospital.

Services.

The following shall be the services in the several departments of the Hospital:—

In Medicine (including Dermatology and Neurology), three co-ordinate services.

In Surgery, three co-ordinate services.

In Obstetrics, one service.

In Gynæcology, one service.

In Opthalmology, one service.

In Otology, Rhinology and Laryngology, one service.

With respect to the above recommendations as to co-ordinate services in Medicine and Surgery, it is understood that the decision reached by the Committee at the present time and with regard to the existing situation is not to preclude the Board at a future time from re-opening the question and considering whether a different system might not better serve the interests of the Hospital and of medical education.

Each of the services in the several departments shall be under a head with such associates and assistants as may be found necessary.

It is the intention that the divisions now existing in the Hospital by which the eye and ear work constitutes one department and the nose and throat another shall be abolished, and that, instead, there shall be an Eye Department separate and distinct from a department which shall embrace the ear, nose and throat.

The several services in all departments shall be so organized as

to include both indoor and outdoor patients, and the heads of such services shall be responsible for the treatment of all such patients.

The heads in Surgery shall retire from their position at the age of 55, and the heads in Medicine at the age of 60 years. The Board of Trustees, however, may decide by a majority of the whole Board to extend the age limit to 60 years in the case of Surgeons and 65 years in the case of Physicians for special reason. The age limit for Surgeons shall apply to the heads in the Departments of Obstetrics, Gynæcology, Ophthalmology, Otology, Rhinology and Laryngology.

The term of service of heads of the several services in all departments shall be ten years, this term to be extended for five years for special reason if a majority of the whole Board of Trustees so decides. This term limit shall apply only from the date of appointment under the present reorganization.

The three heads in Medicine shall not engage in general practice, but shall confine their work outside of the Hospital to consultation.

The three heads in Surgery shall practice Surgery only.

The head of the service in Obstetrics shall practise Obstetrics and Pediatrics only.

The head of the service in Gynæcology shall confine his work in the Hospital to Gynæcology only, but may outside engage in Surgery, but not in general practice.

The head of the service in Ophthalmology shall confine his work in the Hospital to Ophthalmology, but may outside practise the three other specialties of Otology, Rhinology and Laryngology.

The head of the service in the Ear, Nose and Throat Department shall confine his work in the Hospital to these specialties, but may in his outside practice also treat diseases of the eye.

There shall be a Department of Pathology and Bacteriology and a Department of Pathological Chemistry. These two departments shall be placed in charge of professors of the University, it being understood that the University is willing to assume payment of the salaries of such professors.

The Department of Anæsthetics shall be under the supervision of one head.

General Regulations.

All public ward patients shall be entered under the care of heads of services, and shall be available for the clinical instruction of students of the Medical Faculty of the University of Toronto.

Members of the Medical Profession who are not on the Staff of the Hospital shall have the privilege of attending patients in the private, semi-private and semi-public wards.

There shall be a Medical Board, the work of which shall be advisory only. This Board shall consist of the heads of the various services.

Seniors who, by reason of the age or length of service limit, will be obliged to sever their connection with the Active Staff, may be given positions on the Consulting Staff.

The appointments to the reorganized staff shall be made at the earliest possible date, but the Board may decide not to give them effect until the close of the present college year.

Having regard to the requirements of Sec. 20 of Cap. 59, 6. Edward VII., "An Act respecting the Toronto General Hospital," which provides that the Trustees shall allow any medical student of the University of Toronto to visit the wards of the Hospital and to attend them for the purpose of receiving instruction from the members of the Faculty of Medicine of the University of Toronto, the Committee recommends that, in order to make adequate provision for such clinical instruction being given, the Board of Trustees should appoint a committee to confer from time to time with a committee which it is suggested the Board of Governors of the University should similarly appoint for the purpose of determining from time to time the facilities which shall be offered for such instruction and proper regulations with reference thereto.

The second interim report of the Committee of the Board of Trustees of the Toronto General Hospital on Staff Reorganization was presented to the Board, and carried without amendment. The report is as follows:

"Your Committee recommends that the senior professor in Medicine and the senior professor in Surgery in the University of Toronto shall be ex-officio members of the Active Staff of the Hospital. In the event of these professors being heads of services in the respective departments of Medicine and Surgery in the Hospital, they shall be subject to such regulations as apply to the heads of services, but at the termination of their terms of service as such heads, they shall continue as ex-officio members of the Active Staff.

"With regard to the headship of the services in the several departments, your Committee make the following recommendations:

"(1) That Drs. A. McPhedran, W. P. Caven and G. Chambers be appointed as heads of the services in Medicine.

"(2) That Mr. I. H. Cameron, Professor of Surgery in the University of Toronto, be appointed, ex-officio, a member of the Active Staff of the Hospital, and that Drs. G. Bingham, A. Primrose and H. A. Bruce be appointed as heads of the services in Surgery.

"(3) That Dr. J. F. W. Ross be appointed head of the service in Gynæcology.

"(4) That Dr. Kennedy McIlwraith be appointed as head of the service in Obstetrics.

"(5) That Dr. Geo. McDonagh be appointed head of service in the Ear, Nose and Throat Department.

"(6) That Dr. R. A. Reeve be appointed head of the service in the Eye Department. With regard to this recommendation your Committee considered it in the interests of the Hospital to infringe on the rule as to age limit adopted by the Board, by reason of Dr. Reeve's special qualifications for the position. It is recommended, however, on account of such rule, that the appointment, if made, shall come up for special consideration annually."

NOTES.

Canadian Hospital Association.

At a meeting of the Executive of the Canadian Hospital Association at the Hospital for Sick Children, it was decided to hold the next meeting of the Association in Toronto, in the Parliament Buildings (if the rooms can be obtained), on Easter Monday and the following Tuesday, 1908. The meeting will open at 2 o'clock on Monday; the Tuesday session will be held at 9.30 a.m. and 2 p.m.

A reception will be given by the President, Miss Louisa Brent, in the new Nurses' Home of the Children's Hospital on Easter Monday evening at 8 o'clock.

Dr. S. S. Goldwater, Superintendent of the Mount Sinai Hospital, New York, and President of the American Hospital Association; Dr. C. K. Clarke, Superintendent of the Toronto Hospital for Insane; Del T. Sutton, Esq., editor of the *National Hospital Record*, Detroit; Dr. W. J. Dobbie, Superintendent of the Toronto Free Hospital for Consumptives, and Henry M. Hurd, Esq., Superintendent of the Johns Hopkins Hospital, Baltimore, have promised to give papers. A number of the Canadian superintendents have also been invited to contribute to the program.

Graduate Nurses in Toronto.

We learn from Miss Anna M. Greer, in an article published in *The Canadian Nurse* for November, that there are 300 graduate nurses practising their profession in Toronto, and probably 100 more qualified, but not practising. It has been thought for some time that an organization of these nurses should take place. It was hoped that the establishment of a Nurses' Club would do much good by bringing its members in contact with each other.

An effort was made between one and two years ago to have the nursing body of Ontario incorporated by Act of Parliament, and placed in a position somewhat similar to that of the College of Physicians and Surgeons of Ontario. For certain reasons, which it is unnecessary now to discuss, the Bill was withdrawn before any vote was taken upon it. After the withdrawal of this proposed Bill, the idea was evolved to form a club of the graduate nurses in Toronto, with headquarters where the social as well as the material welfare of all nurses would be looked after by their own members. In the same connection provision will be made for the Registry, which is now under Miss Barwick's care, and for reading rooms, club room and a luncheon room.

A charter was taken out giving the proposed Club full powers in the direction indicated. A large proportion of the money required will be realized by sale of stock in small shares, which will give the holders certain privileges in the club. In connection with the Club it is hoped that there will be a residence for 40 or 50 nurses, who will keep in close touch with the Registrar.

At the annual meeting of the College of Physicians and Surgeons in Manitoba the following physicians were elected for the ensuing year:—President, Dr. Rogers; Vice-President, Dr. O'Brien; Registrar, Dr. J. S. Gray; Treasurer, Dr. Jas. Patterson.

At the last meeting of the Saskatchewan Medical Society, held at Indian Head, Nov. 7th, the following officers were elected: Dr. Thompson, of Regina, President; Dr. Charlton, Secretary.

At the recent meeting of the Provincial Medical Association of Alberta, at Edmonton, Oct. 15th, the following officers were elected:—President, Dr. H. C. Wilson, Edmonton; First Vice-President, Dr. Malcolmson, Frank; 2nd Vice-President, Dr. H. R. Smith, Edmonton; 3rd Vice-President, Dr. McEachran, Calgary; 4th Vice-President, Dr. Hewetson, Pincher Creek; and

Secretary-Treasurer, Dr. Dunn, Edmonton. The next annual meeting will be held at Banff.

Thirty-three candidates went up for the last licensing examination for British Columbia, and among them were three ladies.

We learn from the Western Canada Medical Journal that it is now twenty-five years since the federation of the Manitoba Medical College, and the original incorporators, Drs. Blanchard, Good, Patterson, Jones and Sutherland, are still practising in Winnipeg. About 20 freshmen have registered this year for the five years' course, and there are in all the years over 80 students.

Florence Nightingale Honored.

Florence Nightingale, the English philanthropist, has been decorated with the Order of Merit by King Edward. She is the first woman to receive this distinction, which up to the present time has been bestowed only upon nineteen men, each one of marked eminence.

The Order of Merit was founded by King Edward in 1902 for the recognition of especially distinguished services in all walks of life.

It is expected that the new Medical Building for Queen's Medical Faculty, Kingston, for which the Ontario Government donated $50,000 last January, will be opened January 14th, and it is also expected that Dr. Lewellys F. Barker, Professor of Medicine in Johns Hopkins Hospital, Baltimore, will be one of the speakers at the function.

A damage action to recover $10,000, brought by Miss Appeline Belland against Dr. R. Barrington Nevitt, Toronto, was tried Nov. 28th in the non-jury Assize Court, before Mr. Justice Maybee. Miss Belland underwent an operation at St. Michael's Hospital last February. She claimed at the trial that the doctor exceeded his instructions, and that, moreover, he allowed the operation to be witnessed by a number of students. She also stated that she received very unkind treatment in the hospital, that the doctors were cruel to her, and that the nurses tried "to make way" with her.

Dr. Nevitt in the witness box said the operation was an exceedingly difficult and dangerous one, and that it was utterly impossible to perform it in any other way. If the operation had been left incomplete the patient would inevitably have died.

The patient was non-suited, and the case was summarily dismissed by Mr. Justice Maybee.

Personals.

Dr. F. W. Rolph (Trin., '05) is at present living at 831 West Bloor Street.

Dr. F. J. Ball (Tor., '93) has removed from Rugby, Ont., to Regina, Sask.

Dr. F. J. Cawthorpe (Tor., '98) has removed from Tiverton to Park Hill, Ont.

Dr. R. J. Reade (Tor., '04) has removed from Deer Park to 17 Classic Avenue, Toronto.

Dr. Adam A. Beatty, of 201 Bloor Street, Toronto, arrived home from Europe Dec. 5th.

Dr. W. C. Gilday (Tor., '05) is at present engaged in post-graduate work in London, England.

Dr. D. A. Evans (Tor., '03), of Lisle, has sold his practice to Dr. Rawson Harris, of London, England.

Dr. E. L. Hodgins (Tor., '03) has been admitted a member of the Royal College of Surgeons of England.

Dr. J. E. Gibbs (Tor., '96), of Victoria, B.C., has recently returned from Vienna, where he was doing post-graduate work.

Dr. J. T. Clarke, Toronto, who spent two months in Halifax, taking a course at the Military Hospital, returned home Dec. 2nd.

Dr. C. A. Langmaid (Tor., '06), after doing post-graduate work in Glasgow and Edinburgh, was, at last accounts, visiting Cardiff, S. Wales.

Dr. Alfred E. Morgan has been appointed Associate Coroner for Toronto, and Dr. Leeming Carr has been appointed Associate Coroner for Hamilton.

Dr. A. L. W. Webb (Tor., '03), formerly of Brighton, after practising a year in Wooler, sold his practice and good-will to Dr. S. Anderson, Nov. 1st.

Dr. C. More Stewart (Tor., '97), after spending a year as Resident Surgeon in the Toronto General Hospital, practised for a time in Ailsa Craig. He went to England about two years ago, and was for a time Resident Surgeon of the Throat Hospital, Golden Square. He has recently passed the first examination for the Fellowship of the Royal College of Surgeons, England.

Dr. D. J. Armour (Tor., '94) has been appointed Hunterian Professor of Surgery in the Royal College of Surgeons, London, England. Last year he was Lecturer of Surgery in the College.

Miss Smedley has resigned her position as Superintendent of the Western Hospital, Toronto, owing to her approaching marriage. Miss G. Woodland has been appointed her successor, and commenced her duties Dec. 15th, 1907.

Dr. T. Alexander Davies has recently returned to Toronto after an extended period of post graduate work in Glasgow, Edinburgh, Dublin, and Vienna, and is now engaged in practice of diseases of the eye, ear, nose and throat at 56 Wellesley Street.

Dr. F. E. Etherington has resigned the Secretaryship of Queen's Medical Faculty, Kingston, on account of the pressure of his duties in the Department of Anatomy, of which he is professor. Dr. A. R. B. Williamson has been appointed as his successor.

Dr. Rachael R. Todd (Tor., '06), of Toronto, after completing a year's service as Assistant House Physician in the New York Infirmary for Women and Children, has gone to Baltimore, where she has been appointed one of the Resident Physicians to the City Dispensary.

Marriages.

On Oct. 5th, in London, England, Dr. Geo. W. Badgerow (Tor., '94) to Miss Maude Oxley.

On Nov. 6th, at Manitowaning, Dr. Henry Glendenning (Tor., '05), to Miss May McLeod.

On Nov. 14th, Dr. W. B. Hendry (Tor., '04), to Miss Elizabeth A. MacMichael, B.A.

On Sept. 11th, Dr. Arthur L. Hore (Tor., '04), of Acton, to Miss Ethel Hagey.

On Oct. 16th, Dr. J. Heurner Mullen (Tor., '97), of Hamilton, to Miss Ethel Lazier.

Obituary.

E. H. COLEMAN, M.D.

Dr. Coleman, who graduated in 1866 and for 40 years lived in Sidney Township, near Belleville, died Oct. 31st, aged 75. During the last few years of his life he did little or no active practice. He had a stroke of apoplexy Aug. 1st, which was followed by paralysis.

EDWARD J. T. FISHER, M.D.

Dr. Fisher, of 121 Spadina Avenue, Toronto, a graduate of Victoria in 1867, died at midnight Dec. 8th, aged 64. The cause of death is said to have been paralysis following apoplexy.

J. A. ATTRIDGE, M.D.

Dr. Attridge, formerly of High Gate, Ont., and for several years a practitioner in Detroit, was fatally shot in that city on the evening of Dec. 4th.

LORD KELVIN.

Lord Kelvin (William Thompson), England's greatest electrician, died December 17th, after an illness of two weeks, aged 83. He visited Toronto and Montreal in 1897 with Lord Lister and other members of the British Association for the Advancement of Science. The degree of LL.D. was conferred on Kelvin, Lister and others by several Canadian universities. Lister, at the special convocation of the University of Toronto, in the course of his short address, said: "I cannot consider myself worthy, as it were, to unloose the tie of the shoe of men like Lord Kelvin."

WILLIAM BAYARD, M.D., LL.D.

Dr. Bayard of St. John, N.B., died December 17th, aged 94. It will be remembered by many that on the 1st of August last there was an interesting function in St. John, when a large number of physicians of the Maritime Provinces met at the house of Dr. Bayard to offer their congratulations on the seventieth anniversary of his graduation as a doctor in medicine from the University of Edinburgh. He was highly respected and much beloved by his many friends in all parts of Canada. He was President of the Canadian Medical Association at the meeting held in Kingston in 1895.

Correspondence.

THE RE-ORGANIZATION AT THE TORONTO GENERAL HOSPITAL.

To the Editor of THE CANADIAN PRACTITIONER AND REVIEW:

Dear Sir,—After a struggle of over thirteen months, the Trustees of the Toronto General Hospital have reported on staff re-organization. The report was prepared by a committee appointed by the Board on the 7th November, 1906. This committee, it would appear from the report, has very carefully studied the whole question of hospital arrangement from the standpoint of the medical faculty of the University of Toronto alone, and I am told they did not think it necessary, or even courteous, to consult with the members of the staff unattached to that faculty. The report, therefore, as might be expected, is entirely favorable to the teaching staff of the medical faculty, and wholly ignores the fact that interests other than school interests were entitled to and should have been given consideration.

By the adoption of this report, the Toronto General Hospital becomes, practically, an integral part of the medical faculty of the University of Toronto, as it is understood all appointments as heads of services are to be given to members of the teaching staff to the exclusion of outside members.

The action of the Trustees would have been characterized by a desire for a greater amount of public good if, as it has always been maintained, there should be an equal representation of the school men and the non-school men appointed to the staff, and if the members of the medical faculty desired to have three services in Medicine and three in Surgery and one in each of the other departments, they should in fairness have conceded an equal number to the non-school representatives.

When one recalls all the facts and circumstances relating to the foundation of the Toronto General Hospital, the character of the donations which have from time to time been given for its maintenance and endowment, and the magnificent contributions from many of the citizens, it might have been expected that the Trustees would have taken this broader and more public-spirited view, and would not have allowed the making of the appointments to the staff to be so fully dependent on the question of clinical teaching and status in the medical faculty.

The students now play the most important *rôle* in the Hospital, as all public ward patients are to be practically handed

over to them as clinical material. Wards which were formerly assigned to poor patients are now denominated semi-public wards, and no doubt many patients who can ill afford to pay will of necessity have to pay in order to obtain admission, and will be taxed to the full. The number of beds set aside for the sick-poor has been, therefore, lessened, and the General Hospital, whose doors have been for a generation or more thrown wide open to the poor of the city, is, it would seem, henceforth to be conducted largely as a business proposition rather than upon benevolent lines, and almost entirely as an educational institution practically to be controlled by the Governors of the University of Toronto.

The whole spirit and attitude of the Trust has apparently changed, and modern methods of commercial life have entered into the management of the institution, until the intent of the words over the main entrance, "I was sick and ye visited me," seems to be relegated to the background.

Do some of the present Trustees ever think of the Hospital as a place of charity, except, of course, in the conventional sense. Or is it coming to be regarded by them wholly as a business enterprise to be run at a profit?

As the general practitioner is now to be excluded from attendance upon the poor in the General Hospital, a movement for the establishment of a large and up-to-date municipal hospital, which would be open to all the doctors of the city of Toronto, may be expected. The field for such an hospital in a city the size of Toronto, with its foreign population increasing almost daily, need only be suggested to be appreciated, and its benefits to the community at large would be untold. Such a movement would, no doubt, receive the hearty endorsation and support of the ratepayers of the city.

Yours truly,

GENERAL PRACTITIONER.

TORONTO, DEC. 11th, '07.

SEWAGE-DISPOSAL AND WATER PROBLEM.

To the Editor CANADIAN PRACTITIONER AND REVIEW:

Sir,—I regret that I was away from home when you wrote asking my opinion regarding the sewage-disposal and water problem of Toronto for insertion in your last issue.

For more than twenty years all sanitary authorities who discussed the question expressed the opinion that the sewage of

Toronto should be carried off to a safe distance and so disposed of as not to pollute the Bay, nor injuriously affect the lake. We have had opinions in abundance: Shanley, Keating, McAlpine, Mansergh, Herring, Gray, Jennings, and others, and a year or so ago the schemes of Mr. Rust and Dr. Sheard, after full consideration of all the reports of the foregoing, and of the float experiments of the late Mr. Alan McDougall and others, and the testimony of our native fishermen and navigators as to lake and bay currents. Any differences of opinion were not as to the necessity of getting rid of the filth of the city, but as to what "safe distance" and sufficiently "safe disposal" might mean. This was the only difference in the then final deliverance of the present City Medical Health Officer and Engineer referred to above. The latter thought that if the sewage were taken down three miles beyond the eastern city limits it might then be passed into the lake without treatment. The Medical Health Officer thought that the sewage should undergo treatment before being allowed to flow into the lake. This view was that which prevailed at a meeting of the Provincial Board of Health by formal resolution, at which the Medical Officer of Health and the City Engineer were present; disposal on a tract of sandy land north of the Woodbine, after septic-tank treatment, being the scheme decided upon.

The benefits expected from this scheme were:—(1) That the whole Bay and waterfront would have wholesome water. (2) That the pollution of our drinking water by the sewage and surface filth of the city would cease. (3) That we should not continue to foul and misuse the lake, in which all the communities along its shores have a common interest.

Nothing has since occurred to disprove the feasibility of the scheme then resolved upon, or to prove that the expectant benefits will not be obtained by its being carried into effect, or to lessen the necessity of its being carried out.

Experiments and observations have shown that our water supply is polluted, and that currents of polluted water are carried from the Eastern and Western Channels to the intake. The fear of this was one of the reasons for urging the removal and purification of the sewage by means of a trunk sewer, septic tanks and filter beds.

In determining conditions for sewage disposal in connection with some of the towns on the north shore of Lake Ontario to the east of us, some members of the Provincial Board of Health laid it down as an axiom that no community should be allowed to pour its crude sewage into the lake, and this position was

practically confirmed by resolution in the cases of towns applying for approval of sewage-disposal schemes.

How, then, is it to be advocated, now that the people of the Province, with the Provincial Board of Health and the courts at their disposal, should allow this enormous pollution to continue? Or, that a progressive city and educational centre like Toronto should continue the dirty and disgraceful conduct which has been commented upon by the Department of Public Works, in connection with the question of a grant to our harbor, and by several of our judges, when sanitary questions have been before the courts? It is a dark spot which makes a Torontonian ashamed for the civilization and enlightenment of a city regarding which in most respects he feels a justifiable pride. During the past two years I have attended several International Congresses at which questions of sewage-disposal were discussed, and have visited several sewage-disposal works and water-filtration plants, and I assure you that it was very unpleasant to be asked how such things are done in Toronto.

It is disheartening and seems like waste time to have at this late day to try and convince people again of the necessity for a work which all sanitarians for so many years have acknowledged as urgently necessary.

As to the water supply, it has been generally held that the water of Lake Ontario, outside of certain limited areas of sewage contamination, is a wholesome potable water. I am not aware that this has been disproved. If it should now prove to be incorrect, then let us resort to filtration of this water; but first let us have samples taken and examined from situations well out in the lake, beyond areas exposed to pollution. The result will not lessen the necessity for proper disposal of our sewage, and in the meantime this should be proceeded with.

It has been stated that the water of the lake at the mouth of the Niagara River is so polluted by the sewage of Buffalo and other places that it is unfit for drinking; but what we want to know is whether the water a few miles straight out from our own shore is potable water. This is the water which would extend to our intake pipe if the filth of Toronto were so disposed of as not to befoul it.

Cities which have been quoted as reducing their death rate by purification of the water supply have also adopted efficient systems of sewage disposal. Chicago has no filtration, but purified her water supply by expending large sums of money on the Drainage Canal, by which she pumps her sewage and sends it off by the Desplaines and Mississippi Rivers. Berlin and Paris

are disposing of their sewage on tracts of sandy land, and, whilst filtering their drinking water, do not neglect efficient sewage-disposal.

Some of the cities and authorities quoted as examples and advisers to Toronto in the matter of water filtration are in the position of not having such a magnificent body of water as we have, or such facilities for obtaining a naturally pure supply and saving it from pollution.

If it be found necessary to filter Lake Ontario water we shall not improve the process by allowing our own sewage to be added to it before filtration. Besides the natural repulsiveness of the idea of drinking filtered sewage, it is an ascertained fact from observation that a comparatively clean water can be filtered more readily and at less cost than a very dirty one.

Toronto city fathers for the past twenty or twenty-five years have had plenty of outside expert advice and have done nothing. It is to be hoped those of to-day may get to work and have such further data taken by sanitary officials here, who know the situation better than outsiders, and are quite capable of making all necessary investigations and tests, and then it is to be further hoped that some means be taken to push the matter with the citizens by a vigorous campaign.

The report of Mr. Mansergh, which has been quoted in connection with our water supply, spoke in the following very strong terms of our wrong doing in pouring our sewage into the lake:

"During my stay in Toronto I did not meet a single individual who had a single word to say in justification of the existing state of things, excepting that it would cost a very large sum of money to remedy it. To discharge all the sewage of 175,000 people in its crude state into a tideless and practically stagnant harbor is obviously a very wrong thing to do, and every rational man must condemn it.

"If Toronto is ever to take the high position as a residential city which its climate and other natural advantages would justify, this blot must be wiped out. All the world over people are becoming more alive to the importance of safe sanitary surroundings and more critical in fixing upon a place of permanent residence; and a common enough question to be asked now-a-days is: Where does the sewage go to, and where does the water come from?"

What would his opinion be now when the population of Toronto, and consequent filth pollution, are more than half as much again?

WM. OLDRIGHT.

Book Reviews.

Surgical Applied Anatomy. By Sir Frederick Treves, F.R.C.S. Sergeant-Surgeon to H. M. the King, Late Lecturer on Anatomy at the London Hospital. New (5th) edition, thoroughly revised. Pocket size 12 mo, 640 pages, 107 illustrations, of which 41 are in colors. Cloth, red edges, $2.25, net. Lea Brothers & Co., Philadelphia and New York. 1907.

This is one of the rare works which is all meat. That it is widely appreciated is shown by the fact that 37,000 copies have been printed. It deals with a "borderland" subject, where two great branches meet and overlap. To write authoritatively accordingly requires full command of both, and Treves possesses this knowledge in a measure that has made him one of the most famous surgeons and anatomists in the world. He also has the gift of clear and logical thought and hence of terse and graphic expression. The author has again brought it up to the latest date, thoroughly revising it and adding considerably to its text and illustrations. The use of colors is a new feature of obvious value in connection with its subject.

A Text-Book of Physiological Chemistry. For Students of Medicine and Physicians. By Charles E. Simon, M.D., Professor of Clinical Pathology in the Baltimore Medical College. New (3rd) edition. In one octave volume of 490 pages. Cloth, $3.25, net. Lea Brothers & Co., Philadelphia and New York. 1907.

Professor Simon has succeeded in the above work in presenting a volume dealing with the subject of "Physiological Chemistry" which has the two most important attributes of a medical publication—a clear, straightforward practical text brought thoroughly up-to-date.

The tendency in recent years towards the recognition of chemistry as a branch, not only of the preparation for the study of medicine, but of the routine clinical work in private and hospital practice, has demanded an authoritative book which would be of service to the ordinary student and practitioner, as well as to the chemist who devotes his time solely to research, and in Simon's work we recognize just such a treatise.

The subject matter has been freed as far as is practical from theoretical discussions, and stress has been laid on the more practical points; in the first section a general survey of the origin and chemical nature of the fats, albumens and carbohydrates has been undertaken; the second deals with digestion, resorption and excretion, including the ferments, juices, bile, bacterial action, etc.: finally comes a study of the tissues and organs of the animal body, the animal cell, muscle, nerve, and

other constituents; their physiology and products as seen in the urine and foeces are fully considered. The volume closes with a series of about 50 exercises, suggested as suitable for use of students engaged in laboratory work. We congratulate the author on this production and beg to heartily recommend it to students of physiological chemistry.

THE CARE OF THE BABY. The New (4th) Edition. By J. P. Crozer Griffith, M.D., Clinical Professor of Diseases of Children in the Hospital of the University of Pennsylvania. Fourth Revised Edition. 12mo of 455 pages, illustrated. Philadelphia and London: W. B. Saunders Company, 1907. Cloth, $1.50 net. Canadian Agents, J. A. Carveth & Co., Toronto.

This is a simple, practical book, founded on a basis of science, written in a plain and interesting way. It will be found of great service to mothers, nurses, medical students, and active practitioners. The author discusses the hygiene of pregnancy, and then goes on to describe the characteristics of a healthy baby. He also gives minute directions as to the proper methods of feeding, dressing and caring for young children in health and in disease.

So great has been the demand, the W. B. Saunders Company, the medical publishers of Philadelphia and London, have found it necessary to issue another revised edition of their illustrated catalogue of medical and surgical books. In looking through the copy we have received, we find that since the issuance of the last edition six months ago, the publishers have placed on the market some twenty-five new books and new editions—truly an indication of publishing activity. The colored insert plates from Keen's new Surgery, which enhanced the value of the former edition, has been replaced by a new one from the second volume of the same work, and this alone gives the catalogue a real value. A copy will be sent to any physician upon request.

THE PRACTITIONER'S VISITING LIST, 1908, published by Lea Bros. & Co., is a neat little volume, bound in soft red leather, of a very convenient size and weight, and can readily be carried in the coat pocket. The first few pages contain a considerable amount of useful information in a very "get-at-able" form, including dose table, description of certain minor operations, etc., which one may find convenient to refer to in emergencies. Following this, in the body of the book, is provision for a daily record of visits, charges, cash account, obstetrical engagements, addresses, etc. The price is $1.25, or with thumb-index, $1.50.

Book Reviews.

Fourth Annual Report of the Henry Phipps Institute for the Study, Treatment and Prevention of Tuberculosis. (February 1st, 1906, to February 1st, 1907. An account of the general and special clinical and pathological work done by members of the staff of the Institute during the year. Edited by Joseph Walsh, A.M., M.D. Published by Henry Phipps Institute, 233 Pine St., Philadelphia. 1908.

The 400 pages of the above report contain an astonishing fund of general information regarding the cases which have come under the notice of the collaborators, and we cannot too highly compliment these workers on the results of the year's investigations.

The first hundred pages deal in detail with the clinical features of the cases recorded, and in addition the sociological aspect of the disease has been most fully analyzed. Short reports on the results of careful routine examination of the blood of a large number of cases, with the conclusions reached, also of the finding of casts and albuminuria in pulmonary phthisis follow. The subject of infection through the passages of the upper respiratory tract has considerable space devoted to it. Tuberculosis of bones and joints, of skin and glands, of the nervous system, the pleura, etc., each has a separate section. The report closes with the voluminous pathological and bacteriological findings.

To all who are in any way interested in this the most important of all the infections to which man is subject we commend this report.

Green's Encyclopedia and Dictionary of Medicine and Surgery. Vol. IX. Rhinoliths—Thermotaxis. Published by William Green & Sons, Edinburgh and London.

In this, the penultimate volume of the series, we find a similar arrangement and style to that of the former numbers. As in them the illustrations are profuse and clear, the printing, etc., are above criticism.

Certain articles are outstanding. Among them we notice those on scarlet fever, medical inspection of schools, diseases of the stomach, syphilis, tabes, the teeth, and many others. The standard set by the earlier volumes has been well maintained.

Miscellaneous.

Paris Clinics.

The students are beginning to return from the summer vacation, and the Latin quarter is beginning to take on a lively air again. There are almost all nationalities represented here. Of the foreigners, the Russians and Roumanians predominate. It is a study to sit in front of one of the prncipal cafés here and watch the people go by.

The number of students, they tell me, has diminished within late years on account of the expensive living. The time when one could live over here in the students' quarter for $500 per year has gone by, and to live even modestly one needs at least $1,000 per year. Board and room in anything like a fair pension or boarding-place costs $40 per month for the two meals, dejeuner a fourchette, at noon-time, and dinner in the evening. Nearly everybody here takes only coffee and rolls in the morning. You have to pay ten cents for a cup of coffee in even the cheaper restaurants, and bread extra, and a franc, or twenty cents, in the better class, over in the commercial section of Paris, and bread extra; and any kind of a decent dejeuner a fourchette, in the restaurants, in the students' quarter, costs three francs, and dinner three fifty, and from that up. A good-sized glass of beer costs ten cents.

There are not many American medical students here. I have only met two since I have been here. If one wants to study one particular branch of medicine, and understands the French language, this is a good place to come to, as there is plenty of material in the clinics connected with the hospitals. Surgery is particularly good here, in its various sub-divisions—head surgery, abdominal surgery, etc. The Saint Louis Hospital, with its more than a thousand beds for syphilitic and skin cases, furnishes a matchless place for the study of dermatology. The Salpetriere, the celebrated hospital for nervous diseases, with its nearly four thousand beds, is a place that is unsurpassed for the study of neurotic diseases. If one wishes to take several courses in medicine at the same time, Paris is no place to come to, as the hospitals and clinics are so scattered that one would have to race around nearly all day to take even a limited number of these courses. Vienna or Berlin would be a place for such a person to visit. There is a good summer course here given in the School of Medicine on laryngology, with plenty of material.

The Canadian Practitioner and Review.

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Original Communications.

A FEW NOTES ON CLINICS FOR DISEASES OF THE SKIN.

By Douglass W. Montgomery, M.D.

Professor of Diseases of the Skin, University of California.

The following cursory notes written for my own pleasure while on a short trip, have no pretension to being at all exhaustive. They may, however, interest my friends for a few minutes, and if so, they will serve their purpose.

Before boarding the steamer at New York to cross the Atlantic I called on Dr. J. A. Fordyce, who kindly invited me to see his service in the City Hospital. The City Hospital turned out to be what I knew twenty years ago as Charity Hospital, and it was explained to me that it hurt the patients' feelings to be treated in an institution called a "Charity Hospital," so the name was changed. How pleasant it is to feel that even such patients have some recollection of what self-respect is, and, as if in accentuation of this mental attitude, the first patient seen had pediculosis corporis. Lice had so long pastured on his body that indelible traces were left, as extensive areas of pigmentation. Throughout these areas there were many light-colored spots having superficially the appearance of scars. The pigmentation was particularly deep in the flexures. The interest of the case lay in a decided and recent loss of flesh, marked anæmia with eosinophilia, and some chloasma spots on the cheeks. The deep pigmentation alone has often led these cases to be mistaken for Addison's disease, and when one gets in addition, as in this case, rapid loss of flesh, anæmia and pigmentation of the cheeks, the chances for error become so imminent as to be interesting.

In this patient the rapid loss of flesh had produced a curious change in the skin of his abdomen, that was shrivelled and puckered up like an old empty leather bag, a fitting emblem of the man's diminished fortunes. It may be, however, that the creepy beasties this man had had in his clothes had really been a dispensation of Providence, acting in the way referred to by David Harum in speaking of fleas, namely, that a certain number of fleas is good for a dog, as they keep him from brooding and reflecting on the fact that he is a dog. In this view this was but another illustration of Emerson's doctrine of compensations.

The next patient Dr. Fordyce showed me was a young fellow afflicted with eczema scroti. The word "afflicted" is perfectly applicable in this disease, for the patient is scourged, whipped and stung by his malady. In addition to this exquisite torture the affection is apt to be obstinate, and under such circumstances relief may be awaited, though not patiently. In the instance under consideration there was a hard, thickened, scaly patch with much itching on the front of the bag. Considerable amelioration had been obtained by a course of lotions of resorcin gradually increasing in strength from ten to thirty per cent. till a decided inflammatory reaction was secured. Then the part was treated with calamine lotion till the inflammation subsided. It was a variety of the old principle of arousing enough inflammation to carry away with the accelerated and increased lymph stream the old inflammatory induration. The patient himself was so pleased with the result of the first course of treatment, that he wished immediately to enter upon another.

After leaving New York, and enjoying an uneventful voyage across the Atlantic, we landed at Bremen and went on to Hamburg. In Hamburg I had the pleasure of visiting the large venereal service in the General Hospital, the Hospital of St. George, with Dr. Arning. This institution is admirably outfitted. Of syphilis alone, about seven thousand cases are treated annually. Other than the venereal diseases, however, I saw only a few instances of psoriasis, one widespread lupus, and one pityriasis rosea. The service is what one might call monotonously depraved. Dr. Arning was employing a new treatment for chancroid. Everyone is aware how tantalizing the treatment of those ulcers is. They may be sluggish in healing, or new ulcers may break out; or even when healed it is not infrequent for the scar to break down, and the work has to be done over again. Dr. Arning finds that by treating the ulcer with a hot jet of permanganate of potash he gets a rapid solid healing without breaking down. This clinic should be an excellent one in

which to study syphilis. The material is abundant, Dr. Arning is energetic, and the pathological department is well outfitted.

It was while in Hamburg that an incident occurred that made me especially proud of San Francisco. I was telling an acquaintance of a mutual acquaintance in San Francisco, whose course in a certain transaction had not met with general approval. "Oh," he said, "he is just like all of you out there." For a few minutes I was rather taken aback by his naive impoliteness, but keeping my temper, I said, "You ought to have seen the way our local fire insurance companies met their obligations." I then told him that there were two local fire insurance companies in San Francisco, the stock of which was mostly owned within the city. The stockholders therefore lost, not alone through their fire insurance stock, but shared with others in the general calamity. I said that the California Fire Insurance Co. paid its obligations in full as soon as the losses could be determined. I also told him that the other company, The Fireman's Fund, lost more than ten millions of dollars; that its vaults did not hold, and that all their books were burnt, thereby destroying evidence of either debts or credits; that they, however, reincorporated, found what they owed and paid in cash, at first fifty per cent. of their losses, then six per cent. and gave stock for the rest, and that the stock to-day is excellent. I said further that those who had insured in The Fireman's Fund had already received about seventy-five per cent. of the face value of their policies, and that they would ultimately be paid in full. While I was speaking my acquaintance was looking into a microscope. As I proceeded with my recital I could see his eyebrows rise slightly, his eyes open a little and his lips part as indicating involuntary surprise, and he said in a low tone, "How did they do it? We couldn't." Until then I did not appreciate what a shot I had landed. I simply said, "You probably have no conception of the financial strength of that city, nor of the integrity of the better class of her merchants."

This resurgance of The Fireman's Fund is as gallant a piece of work as has ever been accomplished in commercial life.

From Hamburg we went to Copenhagen and there I met one of the most amiable characters it has been my good fortune to encounter, Professor Erick Pontoppiden. He has a large and interesting clinic for venereal diseases at the Vestre Hospital, where I spent a very enjoyable and instructive morning, heightened by the fact that the Doctor speaks English fluently, having lived a long time in the Danish West Indies, where practically nothing but English is spoken.

Dr. Pontoppiden told me that the compulsory examination of prostitutes, after being tried in Copenhagen for some time, had been abandoned. This step was partly owing to the efforts of people opposed to all such examinations, and partly to the fact that no examination, no matter how thorough, will enable a physician to give a certificate to a public woman that she is not liable to convey disease through sexual congress. In this clinic I saw an astonishing number of instances of the pigmentary syphilide in the usual situation, as a collar about the neck. In my own practice I see very little of this particular syphilide. This is undoubtedly due to the fact that I see very little of the early syphilis in females, of which the pigmentary syphilide is a symptom. Outside of prostitutes, most women who get syphilis acquire it from their husbands. As it is to the husband's interest to conceal the disease from his wife, it is either neglected or entirely overlooked in its early stages, and so it comes about that the specialist for diseases of the skin, in his private practice, sees most of the cases of syphilis in the female in the later stages of the disease, after the pigmentary syphilide has long since faded away.

Dr. Rasch, of Copenhagen, has an excellent service in the Commune Hospital, of both skin and venereal diseases. By far the most of the patients are venereal. The doctor told me that there is a law requiring all those having venereal diseases, applying for relief at the hospital, to be treated free of charge. This is a well meant effort to stamp out or control those plagues; but behold how it works: Because of this benevolent law sailors of all nations hasten to Copenhagen as being a good place to get free treatment. While in this city being cured it is not to be imagined that they are strictly continent, and no doubt many a case of infection is owing to them. This is one of the best instances I ever found of misplaced well-doing.

Dr. Rasch was treating psoriasis by painting the patches with pure coal tar. The tar should only be painted on, not rubbed in, as in the latter case it is apt to cause dermatitis. In other cases of psoriasis he was using chrysarobin locally, but in very weak dosage (1-1000).

While in Copenhagen Dr. Reyn kindly showed me the Finsen Institute for the treatment of lupus. With us in San Francisco lupus is a rare disease, as even in a large practice one may not meet with more than one or two cases a year. In the Finsen Institute, however, the patients are in crowds, with the disease showing itself in all sorts of forms, and on all parts of the

body. Light as developed by Finsen is the chief, though not by any means, the only agent employed. The treatment by light has many disadvantages. It is long-enduring, requiring from one and a half to two years for anything like an extensive case. It is tedious, for each sitting lasts an hour or more, and the sittings are frequent. It requires constant and accurate care on the part of the attendant, who has immediate charge of the patient, as the essential of the treatment is to keep the focus of light in the correct place, and also to keep the spot under treatment exsanguinated by pressure. This last is an important point, as otherwise the blood circulating in the tissues interferes with the action of the light. These two things, the accurate adjustment of the focus of light and the exsanguination of the tissues, mean that neither the attendant's attention nor her fingers may relax. Gentle reader, did you ever try to keep your attention on an uninteresting subject for an hour? or even on an interesting subject?

The treatment is not by any means always successful, and even when successful, there are frequent recurrences. With these drawbacks it is no wonder that the first enthusiasm aroused by the treatment has measurably subsided, and that some men whom I spoke to on the subject are decidedly opposed to the procedure.

The arguments in favor of the Finsen light treatment are: That it is frequently successful; that the scars following the light treatment are usually soft and inconspicuous; that the light treatment is often applicable when other treatments such as excision or cauterization are contraindicated or almost impossible, as around the eye.

The fact is that the light treatment is only a valuable addition to the treatment of lupus, and in the Finsen Institute itself they use many other forms of treatment, such as, the electrocautery, pyrogallic acid, and so forth.

A curious circumstance in regard to recurrences is that they often happen far removed from the original focus. This phenomenon would seem to be opposed to our usual conception of lupus being a strictly local disease.

I asked both Dr. Reyn and Dr. Francis if they found many cases where there was tuberculosis of other organs coexisting with lupus. They said they did not find many such, although they were convinced that tuberculosis was more frequent among lupus patients than among patients afflicted with other diseases. I also took occasion to ask both these men what they thought of the nature of lupus erythematosus. They both expressed them-

selves as not knowing what it was, but as believing that it has no affinity whatever with tuberculosis or lupus vulgaris. In the chronic form of lupus erythematosus they use the Finsen light with success in about fifty per cent. of the cases.

I was interested to learn that Dr. Reyn had worked out the opsonic index in one hundred cases of lupus vulgaris with absolute lack of success. He found that the variations of the index in patients suffering from lupus vulgaris did not differ in the least from those of the same number of normal individuals.

From Copenhagen we went down to Berlin where we saw a clinic of a very different nature from any hitherto encountered. In Professor Lesser's service in the Charité, Professor Hoffman has under his immediate charge quite a menagerie of monkeys, sheep, goats and rabbits that he has infected with syphilis. While standing in the pen watching Dr. Hoffman examining some infected monkeys I felt a slight tugging at my coat, and turned to find a syphilitic almond-eyed goat nibbling at the hem of my garment. After this, I confess to having had a very creepy feeling in Dr. Hoffman's barnyard. Dr. Hoffman told me he had carried the syphilitic virus through ten goats, without any apparent lessening of its virulence. The attendants handle these infected animals fearlessly, and with an air of security surprising to one aware of the virulent nature of the poison to which they are exposed. They said no accidental infection had as yet taken place. This statement is also surprising in view of the vast number of accidental (not venereal) infections that occur in ordinary life.

Incidentally it may be remarked that the phagedena of phagedenic chancre seems to be due to the spirocheta refringans.

The discovery of the spirocheta pallida has caused a fresh enthusiasm in the study of the origin of syphilis, and Professor Hoffman says the belief that this disease was brought to Europe by the crew of Columbus returning from America is again a favorite. If this is correct, Europe may thank America for four most interesting products, the potato, tobacco, quinine, and the spirocheta pallida.

From Berlin we went to Dresden, where I visited one of the most interesting of clinics, that of Dr. Werther. Dr. Werther has charge of the service for diseases of the skin and of the genito-urinary system in the General City Hospital. The hospital building itself is most interesting. It is the old palace of Count Markolini, and the door handles still bear the crown of the former noble occupant. Attached to the hospital there is a beautiful garden or park that is now enjoyed by the city's

charity patients. This Count Markolini was a wonderful fellow, and as Marshal of the Court of George the Just of Saxony, arranged everything in the royal household according to his own ideas. He was the first to introduce Chinese porcelain into Dresden and so to develop that industry, that has ever since thriven there. He even brought over some Chinese, to whom he assigned special apartments in the Royal Palace. It now comes about that in the rooms formerly occupied by this high and mighty personage Dr. Werther and Professor Schmorl are deeply interested in the study of spirocheta pallida. Professor Schmorl was the first one to demonstrate this micro-organism in the tissues by the Giemsa stain. Previous to that it could be objected that the micro-organism stained in smears by Giemsa, and that stained, for instance, by the silver method in the tissues were really two different organisms, taking stains differently.

Dr. Werther showed a particularly interesting case of syphilis in a little girl of two years of age. She had still the traces of a chancre on her lower lip and an eruption of secondary syphilis on her body. Spirocheta had been demonstrated in the chancre. She came of a family, all of whose members had syphilis. The mother, while pregnant with this child, had an inunction treatment under the direction of Dr. Werther for florid syphilis. According to our usual ideas, a child born under such circumstances should be immune from inoculation by syphilitic virus. This child, however, was not immune, and later on, as we have seen, she acquired syphilis by inoculation into the lower lip.

There was also in the hospital an elderly woman suffering from that very interesting affection, mycosis fungoides, who was doing badly under all forms of treatment, even under the X-ray. Usually the X-ray markedly controls this disease, and especially hinders the formation of the characteristic large tomato-like masses. It is true, that even in spite of the X-ray, the patients almost always die of the disease, but usually the amelioration and comfort from the X-ray and the retardation of the course of the disease are so notable that the introduction of this mode of treatment can be considered one of the great advances in therapeutics. To Dr. Werther's surprise a patient suffering from mycosis fungoides, that he treated with the X-ray a few years ago, recovered completely, and has ever since remained well. This, however, is an unexpectedly good result.

In showing a young fellow with a particularly well marked syphilitic eruption Dr. Werther remarked that he had been treated in a Nature Cure Institute. He said he got some of the

most neglected cases from such institutions where the patients were told that the eruption breaking out showed that the disease was coming to the surface. When their money was gone, however, they were given minute directions how to find the city hospital. The ways of the quack, resting as they do on the solid basis of human nature, are strikingly similar all the world over.

I doubt if irregular medicine is any less frequent in Germany than with us. For instance, while in Hamburg I entered a pharmacy where a man, who seemed to be the proprietor, was in earnest conversation with a customer. They were talking quite distinctly, and were so situated that I could not help hearing what they said. The customer was telling anxiously of his wife, who had a serious dysenteric attack. The druggist listened to him, and finally gave him a small bottle of medicine, directing precisely how it should be taken. For the medicine the charge was seventy-five pfennigs, about eighteen cents, and nothing was said about a fee for advice. This was cheaper than having one's hair cut. It may be that the husband had heard the French adage, "If you lose your wife and fifteen cents, it is a great pity for the fifteen cents."

From Dresden to Prague is but a short and pleasant journey, with an interesting city at the end as a reward for one's trouble.

Professor Kreibich has now the Clinic for Diseases of the Skin, formerly held by Professor Pick. The University Medical School is peculiar in that it is bilingual, there being a German and a Bohemian service. The hatred between the two races is so intense that they will not even be sick together.

Professor Kreibich showed me severel cases, among them three patients suffering from dermatitis herpetiformis. Dermatitis herpetiformis is an affection in which American dermatologists take a special pride, because of the part played by Louis A. During, of Philadelphia, in elucidating it.

After leaving Prague we went by way of Nuremberg to Munich, where I did myself the pleasure of calling on Professor Posselt. Among his cases were two that were treated with the continuous water bath. One of these was afflicted with pemphigus. The other suffered from dermatitis exfoliativa that was said to have developed out of a forerunning psoriasis and seborrheic eczema. This man had dwelt in his tub for several years. Occasionally he would try the experiment of living in the open, but the itchiness, dryness and burning would soon become so intolerable as to drive him back into the water again.

In visiting the hospitals in Germany one is struck by the vast number of patients suffering from syphilis. Surely syphilis is

not so common with us as it is on the continent of Europe, although it must be rapidly increasing with us too. This is one of the most sinister prices we pay for increasing population and increasing commerce, increasing cost of living, and its attendant postponement of the age of marriage.

Another observable feature is the number of lupus patients, and the hopeless tone assumed when speaking of the treatment of this disease. When I would mention how few cases of lupus we have in California, "Remain happy in their absence," would be the invariable answer.

As regards the treatment of syphilis, mercury still holds the first place, and one could see by the blue marks on the patients' skin that in clinic after clinic the inunction method was the favorite. It was so much the favorite in fact that it was seldom mentioned, although many other ways of introducing mercury were adverted to. Good wine needs no bush, and mercurial rubbings speak for themselves. Some men were using intramuscular injections of salicylate of mercury, which undoubtedly are good, and some the bichloride of mercury, which is also excellent. One man apologized for not employing inunctions, saying that one of his assistants was desirous of trying a new preparation much advertised as an intramuscular injection, but which left a fine trail of the mercurial stomatites behind it. One man was using the sozoiodolate of mercury.

During my journey I heard much of atoxyl as a remedy for syphilis, but saw very little of it used. One man said he used it if he found mercury to disagree. After using atoxyl for a time he would drop it and recur to the use of mercury, which he would not expect to agree. To get decided antisyphilitic effects from atoxyl, however, it has to be pushed to its physiologic limit, and there is danger that the patient may become temporarily blind. There is no occasion for insisting on the gravity of such a situation, as a perambulating case immediately becomes a hospital case. It is no wonder that many are entirely opposed to employing this drug against syphilis. Max Joseph, for instance, did not alone advise atoxyl as an antiluetic remedy, but warned his hearers most emphatically against its use.

THE HEART IN TYPHOID.

By W. H. B. Aikins, M.D., Toronto.

In this disease, as in many other acute febrile infections, the brunt of the attack falls upon the heart-muscle. Little is known of the changes taking place in the earlier stages, because death is rare at this period, but the myocardium has often been described as friable and discolored. Later in the disease we find both parenchymatous and interstitial changes. The muscle fibres contain albuminoid granules, the nuclei become enlarged, elongated and surrounded by pigment. The interstitial change is shown in the round-celled infiltration between the larger muscle-bundles, with, perhaps, an obliterating endarteritis in the smaller arteries (Hayem). Both sides of the heart are involved in these pathological processes, the left usually the more. Clinically, the heart seems to recover completely, and fibroid changes after typhoid have rarely been demonstrated.

Endocarditis is more common than is usually supposed, but nevertheless, from a percentage standpoint, is a rare complication. The bacillus typhosus has been isolated from the vegetations, but probably the lesion was due to a secondary infection with pyogenic cocci. Pericarditis occurs only very exceptionally.

The Johns Hopkins series[1] show 1,125 cases in which the heart sounds were clear throughout the disease. In 333 cases murmurs were heard at some time during the course of the illness, of which 16 were thought to be due to previous valvular trouble. Of 316 cases the murmur was systolic in 312, diastolic in one, diastolic and systolic in three. The murmurs were observed in 85 per cent. during the first three weeks. The murmurs persisted throughout the attack and were present at discharge in 31 out of 138 cases, in which the point was carefully noted. He states that the majority of the murmurs were due to the relative dilatation of the mitral orifice, although probably some were due to endocarditis. At autopsy, endocarditis was present in six of the series; of these the diagnosis was made in three clinically. The typhoid bacilli have been found in the vegetations, and endocarditis of the aortic valves has been produced experimentally by Lion[2] with intravenous injections of typhoid culture. In the 2,000 Munich cases that came to autopsy there were only 11 instances of endocarditis. They did not state whether or not typhoid bacilli were found alone or together with some pyogenic organism, but as a rule endocarditis as a complication of typhoid fever is usually due to secondary infection. Pro-

chaska[4] has observed in mixed infections that ordinary pyogenic germs acquire an increased virulence under the influence of typhoid infection, but might not this be due simply to the asthenic condition of the patient and consequent low power of resistance ?

Isolated instances of endocarditis as a complication of typhoid fever are to be found in the literature, as the one to which we will again refer from the *Lyon Médicale*, March 18, 1905; but unfortunately the bacteriology was not worked out in this case. It was one in which vegetative endocarditis was found on the margin of the mitral valve, so they were unable to state either the presence or absence of Eberth's bacillus.

Pericarditis was present in three of the Johns Hopkins series, of which death followed in one, and in this case typhoid bacilli were found in pure culture. Of the 717 cases[5] admitted to the Montreal General Hospital from January 1st, 1897 to December 3rd, 1902, there was but once case of pericarditis.

The onset of endocarditis is usually seen during the 3rd week accompanied by pain, fever and leucocytosis,[6] the fever and leucocytosis often preceding the localising symptoms. The complication is usually ushered by chills, in more than one-quarter of the cases.

Frank Hinchley,[7] St. Louis, relates a case of typhoid with relapse on the 24th day. On the 24th day of the relapse a synovitis of the knee was noticed. On the 29th day she complained of sharp pain in the cardiac region associated with restlessness and anxiety. The pulse rose from 92 to 108, to 130-150. The acute symptoms subsided in ten days, but the rapid heart's action persisted for five weeks. No blood examination was made.

In this connection Hewlett[8] states that typhoid bacilli are not to be found in later weeks of typhoid fever, but reappear after the relapse.

Cole[9] finds that 75 per cent. of the cases showed typhoid bacilli in the second week. The case before referred to from the *Lyon Médicale* was that of a patient 26 years of age, in the third week of the disease when she entered the Hospital; pulse 150, arrhythmia and tachycardia present. The patient came in on Nov. 10th, and died on Dec. 21st. During the course of the illness variable systolic murmurs were heard, but the heart was not enlarged.

The pulse of patients admitted to the Toronto General Hospital in my service with typhoid fever early in the attack usually showed dicrotism, and the more severe the symptoms in the early stage of the disease the more marked was the dicrotism. This

dicrotism became gradually less and less as the disease advanced, so that in the third week a pulse which during the first and part of the second week showed dicrotism has now lost its dicrotic character. The cases which showed most marked dicrotism all recovered, so that the prognosis seems to be good in these cases. On some days the dicrotism seems more marked than on other days.

Sudden death in typhoid fever occurs in about 2 per cent. of the fatal cases, and is the accident to be most feared in connection with the terminations of this disease. An accident of this description indicates the extreme caution which must be exercised during the convalescence of a typhoid fever patient, as the end may come suddenly, the consequence from movement or slight effort of the patient in bed. This ending may be preceded by symptoms of collapse, or death may be sudden without warning. This may occur in the 3rd or 4th week of typhoid fever, more frequently after the temperature has become normal or subnormal, and in the general weakened condition following the abatement of the fever, and sometimes the lessening of attention on the part of the physician and nurse and the withdrawal of stimulation. A French clinician, in analyzing 145 cases of sudden death from typhoid, noticed that it happened twice in the first week, 22 times in the course of the 2nd, 54 during the 3rd and 31 during the 5th week and the period of convalescence.

Sometimes sudden death is preceded by different symptoms, such as tachycardia or arrhythmia, but in some instances collapse occurs immediately. Sudden cyanosis and dyspnea with fatal collapse through paralysis of the heart, thrombosis of the pulmonary veins and œdema of the lungs may occur in convalescent patients who have left the bed too early. In other cases the patient becomes pale, but may have a few convulsive moments, utter a cry and become inanimated, and in these cases it is rare that he can be recalled to life with even the most energetic stimulation of caffeine, strychnin, digitalis, alcohol or hot applications over the heart.

This accident is very rare with children. In a series of over 350 cases analyzed it was not noticed once. Sudden death may occur as a result of hemorrhage, or pulmonary emboli or cardiac thrombosis, but during the wane and convalescence of typhoid fever sudden death is due to syncope, and in the matter of syncope it is risky to state the starting point of the reflex which acts upon the bulbar cardiac centres.

Treatment of the failing heart in typhoid fever requires almost constant watching and the closest attention to details to ward off

an impending end. Local revulsion seems to be useless, and plasters over the cardiac area are often dangerous. A means of revulsion which has apparently proved efficacious is the application of a bag filled with ice on the region of the heart. Where there is a typical myocarditis, a light flannel covering is first placed to avoid immediate contact and a bag filled with ice is permanently kept on the precordial region. This appears to have a quieting and strengthening action on the heart, and cardiac troubles are often seen to disappear.

Among the different medicines used in the failing heart of typhoid fever, mention must first be made of strychnin, digitalis, caffeine and ergot. Each of these therapeutic means has its indications, which necessarily vary according to the condition of the patient. Digitalis acts as a cardio-vascular stimulant, quickens cardiac contraction, and under its influence one can observe the heart beats grow stronger, and the pulse become freer and less rapid. Arterial tension is increased. The action of digitalis is not very rapid, and its elimination is slow, and on that account we have seen caffeine succeed better in cases of typhoid myocarditis.

Caffeine is an excellent remedy which has rendered me great service. It can be used by way of the mouth, but it is especially by subcutaneous injections that its effect is most manifest. These injections can be repeated in serious cases 3 to 4 times in 24 hours. Under the influence of this drug the heart seems to right itself quickly. At first the action is more rapid, then becomes slower and the beat becomes more energetic. The action is rather transitory, but when caffeine is given in combination with strychnin one often succeeds in sustaining the heart effectually. The action of alcohol in typhoid fever has been a subject of much discussion for many years indeed, but my experience leads me to give it in full doses, continuously watching the patient, and lessening or increasing the quantity of alcohol according to the varying conditions of the patient.

In some cases where the heart is failing as the result of the intensity of toxemia or of loss of blood from intestinal hemorrhage, I have had the most gratifying results with interstitial injections of the saline solution administered in the pectoral regions.

In one case which I had under my observation in the Toronto General Hospital there were in all 28 hemorrhages recorded. By the most energetic use of the saline solution the heart was given sufficient fluid on which to contract, and though the patient during a trying period of ten days was blanched and almost bloodless, recovery ensued.

When the heart appears to be rapidly failing with increased frequency of pulsation and lessened arterial tension, the application of heat or of the hot water bag over the heart, as observed by Schott, appears sometimes to restore the needed equilibrium.

Dr. Philip King Brown[10] gives his valuable experience on the use of Nauheim baths for the failing heart in acute and infectious diseases, and came to the conclusion that the artificial Nauheim bath may be of service when associated with supportive measures, as the continued use of alcohol and the routine administration of hypodermic injections of digitalis and caffeine. If in pneumonic cases, why then, in administering the baths in typhoid cases, could not the artificial solutions of salt and chloride of calcium and the generation of carbonic acid gas be introduced ? Unfortunately, the facilities for the carrying out of this method have not been at my disposal.

Sir Lauder Brunton[11] advocates the use of chloride of calcium in sudden heart failure administered in 5 to 10 gr. doses every 4 hours, simply dissolved in water. I have used calcium lactate in several cases of typhoid fever where the ventricular cell appeared to be losing power, and I think I may safely say that the result was so marked as to encourage me in the further use of a drug which deserves a wider trial.

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SOME PHASES OF KATATONIA.*

By John Gerald FitzGerald,

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It was in 1874 that Kahlbaum described a special form of mental disease whose characteristics were those now elaborated by Kraepelin under the head of the Katatonic form of Dementia Præcox. The original sketch still holds good in the main, Kahlbaum emphasizing those features which writers since his time have only been able to slightly modify—the symptom-complex—a progressive cycle showing first depression, then excitement and later stupor, with intellectual enfeeblement finally intervening; and these accompanied by motor disturbances characterized by spasticity make up the disease picture to which the author gave the name Spannungs-Iressein. It will, perhaps, be as well just here to very briefly make one or two statements in regard to the question as to whether the Katatonic syndrome is ever found in any other clinical condition than that which we designate Katatonic Dementia Præcox. I cannot do better than to quote Régis, a prominent psychiater of the French School, whose views are not entirely out of sympathy with those of Kraepelin. He says: "To-day there is a general tendency to admit that the Katatonia of Kahlbaum is of two varieties—that which appears as Dementia Præcox, when it constitutes one of the chief clinical forms; the Katatonic, the other variety, where it appears only as a Katatonic or cataleptoid symptom (the symptom of catalepsy of Brissaud), and may possibly be observed in a number of the neuroses or psychoses, particularly in hysteria, in depression, in paranoia, in the toxic psychoses and in various psycho-neuroses." His next statement does much to clarify his conception of the Katatonic form of Dementia Præcox. He continues: "The Katatonic form of Dementia Præcox, following the description of Kraepelin, is characterized by the particular states of stupor and excitement ending usually in dementia and accompanied by negativism, suggestibility and stereotypy;" to which I subscribe with the exception, that I cannot agree that all of these patients show stupor in the true sense. I will have occasion to speak further of this later on.

Now that we have a clear idea of the case which may be classed as Katatonic precocious dements, it is only fair to say that the term Dementia Præcox itself, and the term from which it

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was derived, Demence Precoce (Morel being the first to use it in the early sixties), are both unfortunate, in that dementia in its strict, modern, psychiatric sense implies a condition from which recovery is impossible, whereas we know that Kraepelin holds that certain cases of Dementia Præcox do recover. Whether or not they show any psychic scar is probably an open question.

The Katatonic group is perhaps the most interesting of all the cases of mental disease developing in the adolescent and early adult periods, and many fascinating theories have been advanced to explain the origin of various symptoms that arise, but one may say without any fear of contradiction that the exact causes are not known. The etiologic factors that enter into the causation of so many other psychoses probably enter in here also. Defective heredity is quoted by Kraepelin as being present in a large number of cases, but it is idle to quote statistics as probably no two writers agree as to the exact percentage of cases in which the question of defective heredity enters in. Of other factors worthy of consideration Kraepelin lays particular stress on child-birth as being a very important etiologic factor in female Katatonics. Previous acute infective processes are said to be the starting point in some cases, and trauma occasionally may be a factor. After an analysis of a large number of cases I think we are bound to conclude that many individuals who develop Katatonia have always shown some peculiarity, but whether they would later develop a psychosis was purely problematical as other individuals of a somewhat similar makeup were more fortunate and never suffered from any form of mental alienation. Many of the cases show stigmata of degeneration and frequently give a history of gross sexual irregularities, and not uncommonly an undue susceptibility to the influence of alcohol. Since we are still unable to correlate, in every case or even in any case, given causes, certain clinical signs, and constant pathological alterations in the cortex cerebri, we are at liberty to speculate regarding etiologic factors, but such speculation is rarely of any value and is not sufficient to satisfy the critical sense of the trustworthy observer.

In regard to the pathological histology, Alzheimer and Dunton have described certain changes in the brain tissue of Katatonics, and I quote from Dunton's original article in the *American Journal of Insanity*—Vol. LIX. No. 3, 1903. He says in conclusion: "A summary of the microscopical findings of the brain is as follows: there is but a slight cell change and this is distributed over the whole brain, not being restricted to any one area. The greatest amount of cell change is found in the first frontal convolution. The cells show central chromolysis, an occasional

slight degree of pale yellow pigmentation, slight cell atrophy, dislocation and swelling of the nucleus, folding of the nuclear membrane, and an endonucleolus. As a rule the deeper layers are most affected. The motor cells show very slight changes similar to the above. There is a slight increase of neuroglia nuclei. Phagocytosis is well marked and there is a considerable cell disintegration. There is no change in the medullated fibres and no marked vascular changes."

These findings of Dunton are quite similar to those of Alzheimer and other workers, and while they are undoubtedly, as Dunton says, suggestive, he agrees with those who believe that no inferences are to be drawn from these findings, and it is therefore impossible at present to correlate given pathological changes in the nervous tissue with the known clinical manifestations. Just in this connection one might note that the opinion is gaining ground among workers in psychiatry, that neuropathology can go very little further *at the present time* in the elucidation of problems which only a short time ago it was believed could be solved only by the efforts of the neuropathologists. A friend of mine while in Heidelberg during the past summer called on Nissl, and was greatly surprised when this most eminent investigator in the realm of neuropathology told him that in his clinic the field of psycho-pathology was to be more thoroughly tilled in future, because he felt that the result of the work in histopathology was distinctly disappointing. Some other less illustrious persons who believe that changes in the morphology of the nerve cells will explain the parafunctioning of the mind would do well to remember this recent pronouncement of Nissl.

The onset in Katatonia may be abrupt or there may have been certain unusual features in the patient's conduct some time before the symptoms became so marked as to attract the notice of the friends. The age at which the condition most often develops occupies an intermediate position between the onset in early youth of the hebephrenic, and the comparatively late onset in many cases of the paranoid form. Perhaps from the ages of 19 to 24 is the time when the condition most frequently develops. It must be kept in mind, however, that in a goodly number of cases the Katatonic syndrome is engrafted on a defective basis, and the exact time at which the further pathologic manifestations make their appearance is not always easy to decide.

When the onset is abrupt, the following case is an example of the prodromal period: The patient, a young girl of twenty, came home from work one day, refused her dinner, although she usually ate a hearty meal at noon. She complained of strange

uncomfortable feelings in her head, was giddy at times, was afraid she was going to lose her mind (this is interesting, showing as it does, that the patient had a very good insight at this time). She cried and was vaguely suspicious, and appeared not to understand her own family relations; there were fallacious sense perceptions, no resistiveness, but mannerisms were noted, constipation was a marked feature. The condition gradually progressed and established itself in about four weeks, during which time the other symptoms observed were a degree of inertia, drowsiness, crying spells, diminished voluntary expression of ideas, vague, disconnected ideas of harm coming to her and mannerisms. The appetite improved somewhat. Many other prodromata have been observed, and those which have to do with the psycho-motor side are the most significant because they indicate that the condition developing is probably Katatonia. The condition on the psycho-motor side is not a hyper-functioning as in an oncoming attack of excitement, not a hypo condition as when we have to deal with a state of depression, but it is a true parafunctioning. Let me just for a moment illustrate this: the Katatonic need not execute in the course of twenty-four hours any more or any less movement, but he executes them in a clumsy, awkward, roundabout fashion. The easy grace which characterized the movements of the individual when well are replaced by the most bizarre motor activity in which an irrelevancy is plainly discernible. The outward expression seen in the movement is not in accord with the ideo-motor image. Next in importance to the psycho-motor phenomena are the disturbances in the emotional activity. As a rule we have at first a shallow, fleeting depression, which is followed by a condition of mild exhilaration with great motor restlessness. Then follows the stage of inactivity which at the present time, for the want of a better term, we speak of as stupor. Other early symptoms in either the period of excitement or depression, which are frequently present, are: various hallucinatory experiences, disordered nutrition evidenced by loss of weight, etc., and in females there is almost invariably some disturbance in the menstrual history, amenorrhea frequently being complained of.

When the condition has progressed for some little time the characteristic symptoms make their appearance. One of the earliest and most characteristic is negativism. The exact nature of this symptom is a matter of dispute and is really at the present time only speculative because it is quite impossible yet to conceive of an explanation that is anything other than hypothetical. The theory of Pick of Prague is one that is believed by many,

and I give it simply as an illustration: this writer believes that the explanation of the negativistic phenomena is to be found in the absence of inhibition of the antagonistic mechanism, which, according to Sherrington, accompanies every tendency to movement.

Negativism may be well demonstrated by attempting to open the patient's eyes, when he at once wrinkles his eyebrows and tightly closes his eyes, or if he is requested to put out his tongue he closes his lips, and when these are parted his tongue is seen drawn well to the back of the mouth or to the side. It is most important that this symptom be not confused with the disturbance of volition, seen in cases of depression where there is a desire but an absolute inability on the part of the patient to comply with any request made.

The next symptom with which we have to deal is *suggestibility*. The patient is absolutely passive, shows no choice in the direction of mental activity, but shows a tendency to automatic imitation of everything seen and heard. When the patient repeats the words or phrases heard, it is spoken of as echolalia; when movements are imitated, the symptom is described as echopraxia. Bear in mind, however, that these are merely evidences of suggestibility, the second of the triad of symptoms in Katatonia. The third is *stereotypy*. McDonald gives the following concise conception of this symptom: "The lack of desire for the accomplishment of any particular object permits the energy to discharge along the paths of least resistance, which are, of course, the paths which impulses have most habitually travelled. The result is stereotypy." Stereotypies may be those of movements, of attitudes, of acts, of language and of writing. The stereotypies of the Katatonic are often most bizarre and persist without the least modification for years. Habitual grimaces may be included in this category, as may also ties, which are often present. Movements are unnatural and stilted as is the language; mirror-writing is infrequently observed.

In regard to the condition which is commonly spoken of as stupor, much misunderstanding has arisen and it would not benefit us greatly to go into all the phases of the question. That a great many Katatonics who are mute, inaccessible, resistive, negativistic, apathetic, indifferent and inattentive are commonly spoken of as being in a condition of stupor is true, but that there is actually clouding of consciousness is doubtful, because some time after the patient brightens up, he is able to give an intelligent account of practically everything that has transpired. Obviously this would be impossible had there been clouding of

consciousness of any depth. On the other hand there are cases that pass into a true stupor where there is deep clouding of consciousness and the same mutism and inaccessibility. This last stuporous state may occur as an episode in many psychoses and is spoken of as Katatonic stupor or Manic stupor, and is to be distinguished from the mental state described above, which I might speak of as pseudo-stupor, which is the third stage in the progress of a case of Katatonic Dementia Præcox.

In the psycho-analysis of the Katatonic the extremely marked emotional dulling, leading eventually to complete effect dementia, is conspicuous. The attention is usually weak and can seldom be directed. Memory often shows no gross impairment. Associative activity is, as far as we can learn, very slight, the ideas expressed are often fragmentary and irrelevant, and there is a very considerable lesion of volition. Fallacious sense perceptions are common, particularly the auditory variety. The delusional fabric if present at all is loose and disjointed, and makes no adequate impression in consciousness. The physical signs are variable, the tendon reflexes are often exaggerated, fine tremors are usually present; the pupils often widely dilated, at times irregular and unequal. One of the most striking features, however, are the disturbances in the circulatory system. The extremities are cold and blue, the circulation sluggish and the dermatographia often exaggerated. The gastro-intestinal disorders have already been noted. The temperature may be subnormal with slight rises to 99 degrees or 100 degrees F. (Lewis Bruce). I have been working on the blood in these cases and found an eosinophilia which at times is quite remarkable. The further details I hope to report at some future time.

This in brief is a review of the symptoms. The pathognomonic syndrome then is: a psychosis developing in a young individual showing first depression, then excitement with impulsive outbursts which are most striking, and finally a pseudo-stupor, in which negativism, suggestibility and stereotypy are present. This cannot be mistaken for any other condition. In many instances, of course, there are cases which are extremely difficult to differentiate for various reasons, and the exact condition is often a matter of doubt for several months. Of the prognosis, a word or two will suffice. Kraepelin says: "In twenty per cent. of the cases there are remissions simulating recovery. Almost certainly during these remissions certain characteristics of the disease remain behind which indicate that it has not gone on to complete recovery, unnatural behaviour, constrained manner or a strikingly unusual fashion in dress, unusual quiet or an incomplete in-

sight remaining." "In the remissions the patients may be very comfortable for from 5, 7 to 20 years and then an attack of excitement may recur. In the mildest form of Katatonic weak-mindedness under my observation I might record about thirteen per cent. of cases in which the symptoms so completely disappear that the healed ones fill their places in life quite as formerly. I must confess, however, that in some of the cases reckoned herein, light residuals of the disease passed through, such as twitchings in the face, quietness in behaviour, constrained or affected movements, also symptoms of catalepsy are present, indicating that probably the improved condition would only last for some years." Here, then, is the dictum of the man whose conception Dementia Præcox is. I can only add a note indicating certain features which would cause me to regard the outlook as favorable: (1) An abrupt onset. (2) Absence or great vagueness of the hallucinatory experiences. (3) No pupillary disturbances. (4) Very slight lesion in associative activity. (5) Good general physical condition. (6) Menstrual curve disturbed only during the actual period in which the Katatonic symptoms are most manifest. (7) Organic reflexes intact, and finally, preservation of the ethical sense practically intact. The question as to whether Katatonics ever recover or not must receive final consideration later on. What I have already said sums up our knowledge at the present time.

In the differential diagnosis the cases of stupor coming on during the course of an attack of the maniaco-depressive psychosis are most difficult of diagnosis, although hysterical stupor is often extremely difficult to differentiate. If the triad of Negativism, Stereotypy and Suggestibility is present, the case can belong to only one group, and this is the Katatonic form of Dementia Præcox.

Treatment consists in hospital care, nourishing diet and strict attention to elimination, for the cases in the early stages, and re-education later on, the details of which I hope to record in another paper.

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ARTERIOSCLEROSIS.*

By John Ferguson, M.A., M.D., Toronto.

Mr. Chairman and Gentlemen,

The subject upon which I wish to engage your attention for a few minutes is by no means a new one. The literature upon the subject of arteriosclerosis has become a very extensive one; and all I can hope to do on this occasion is to gather up the main features of what is known regarding the clinical and pathological state covered by the term, hoping that these remarks may lay the foundation for a fruitful discussion. Should such be the case, my object will have been attained. As tuberculosis claims many in the promise of youth, so high arterial tension has its victims among the best that are past midlife.

The term arteriosclerosis, introduced in 1834 by Lobstein, is vague, and other names have been suggested. Gull and Sutton called the condition arteriocapillary fibrosis, Virchow designated it endarteritis chronica deformans, Thoma speaks of it as angiosclerosis, Haller named it atheroma, and others have given it such names as sclerotic arteritis, chronic arteritis. In 1876 Friedlander called it endarteritis obliterans.

No one for a moment will doubt the importance of this morbid condition. Any disease which causes as many deaths in the prime of life as does arteriosclerosis may well claim a share of our thoughtful consideration. It is only by retaining a healthful condition of the arteries that we can hope to reach a green old age with the enjoyment of a fair share of mental and bodily vigor. Some may exclaim that old age is not desirable, and to such we would say you can attain your object by living a life of over-indulgences in foods and drinks, coupled with manifold cares and anxieties. But to those who take the more rational view of desiring length of days with wisdom and health, it can be safely proclaimed that arteriosclerosis is among the most preventable of the diseases to which the term preventive medicine is applicable. As Sir James Barr has well said, "if men were as anxious to live well as they are to live long, they would perhaps more frequently attain their end."

Did time permit, much might be said on the history of this subject. Among the earliest writers upon diseases of the arteries must be mentioned Lobstein, who used the term arteriosclerosis in 1834, followed by Haller, Scarpa, Bezot and Kreysig.

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These men advanced the inflammatory theory as the cause of the arterial changes which they observed.

About the year 1844, Rokitansky, the great Vienna pathologist, opposed this view, and held that the changes in the vessels were due to some material in the blood which became deposited in their walls and proved detrimental to them. This humeropathological theory of Rokitansky was supported by Donders and Jansen, but just as stoutly opposed by Engel and Neumann.

The miscroscope now became an instrument of precision, and by its aid many important observations were made. Resse, who gave much study to the histological changes, advanced the view that the degeneration in the vessels was caused by interrupted nutrition and new connective tissue formation.

Virchow threw all the weight of his great name and the conclusions gathered from his enormous data against the humeral theory of Rokitansky and many of his successors. The name which he gave the changes in the arteries, namely, endarteritis chronica deformans, clearly shows that he espoused the inflammatory theory of Lobstein and those who had written prior to the time of Rokitansky. Virchow claimed that two main changes occurred, namely, a simple degeneration, and an atheromatous degeneration. The first he regarded as a passive occurrence, while the second was an active formative process. The hyperplasia of the intima and the sclerosis of the vessels he taught to be the results of chronic inflammation.

Cohnheim and his school elaborated the inflammatory theory. They tried to show the part played in the process by the white blood corpuscles and the vasa vasorum. To Cohnheim much credit is due for his efforts to clear up the way by which the intima received its nutrition from the blood, and in what way its tissue could be penetrated by the leucocytes. But in what way perverted nutrition, or the invasion of the intima, led to atheroma still remained unexplained. Cohnheim and Virchow held that the various morbid changes, however, were caused by errors in nutrition and the passage of white corpuscles from the vasa vasorum.

At this stage of the discussion Traube came on the scene with his mechanical theory that the cause of the arterial changes was high blood pressure. Rindfleisch and his school argued that the alterations found in the vessel walls were due to a slowing of the blood current. These pathologists, Rindfleisch, Stronganow, Keester and Talma, were unable to trace any connection between the vascular media and the non-vascular intima, and therefore, thought that the latter was seriously affected by a slow blood

stream. This led these men to advocate anew Resse's theory of interrupted nutrition.

Durante, Trompeter, and Krafft added to the discussion by showing that the media is always involved about the same time as the intima, and that the vasa vasorum are the real agents in maintaining the nutrition of the vessel walls. By the experiments made by Durante, it was shown that stoppage of the flow in the lumen of the vessel did not affect its nutrition; but that a similar condition in the vasa vasorum at once caused degeneration.

These various theories bring the subject to the position taken by Thoma. His theory has been well named the compensatory process. He divides arteriosclerosis into primary and secondary. In the primary there is a yielding of the vessel from loss of elasticity. The vessel is widened and the blood stream slowed. Connective tissue is formed in the deeper layers of the intima to restore the original relations. As age advances this thickening goes on regularly in keeping with the slowing of the blood current. In this way an adjustment is effected between the heart, the vessels and the blood. In the secondary form of arteriosclerosis the change has its origin around the vasa vasorum, or in the small arteries. These changes in the small vessels may be nodular and local, or diffuse. When the vessels yield at points they may bend at these points, and in this way the tortuosity noticed in arteriosclerosis is explained.

This very ingenious theory of Thoma, which rests upon an unproved hypothesis of slowed blood stream and a lost vessel elasticity, has been keenly contested by Beneke, Marchand, Fuchs, Huchard, Gibson, Councilman, and others. They think it is pushing the mechanical theory too far, and are strongly inclined to look for the causes among more general and constitutional states and tendencies. These later teachers cannot agree with Thoma that when the blood stream becomes slowed down either by dilatation of and lost elasticity in the vessels, or by resistance to the onward flow of the blood from any change in the tissues, there is established a compensatory endarteritis.

These brief remarks on the history of the subject brings us to what may be called the present and more rational view of the etiology of arteriosclerosis. And I think we may admit that the following are the factors that stand in the relationship of cause and effect :

1. Long and continued straining of the coats of the vessels affects nutrition and elasticity. The periods of rest are short-

ened and those of strain lengthened. The circulation in the vasa vasorum is interfered with and the process of inhibition of nutriment by the intima disturbed. At the same time there is hypertrophy of tissue in the media. The strain upon the tissues of the media affects the lumen of the vasa vasorum, and, therefore, the nutrition of the entire vessel. Barr has pointed out that when the arteries are under high tension the vasa vasorum are compressed and the flow of blood through them is impeded. The arterial walls tend to undergo degeneration for lack of proper nutrition. As a result of this malnutrition irritative processes ensue with the proliferation of cells in the intima. These cells undergo degeneration, giving rise to atheroma or atheromatous ulceration or calcification. There can be no doubt now but that this much of the mechanical theory is fully sustained.

2. Long-continued nervous strain, anxiety, and worry can raise the arterial tension, and, as a result, malnutrition, with all its evils, takes place in the walls of the vessels. The position is now too well established to require proof or to admit of contradiction. The tension need not be continuous. The intermittent form, as in strong emotion, may induce thickening in the vessel walls.

3. Excessive indulgence in food is a potent factor in the causation. The overworked vessels under high tension, and irritated by the products of a faulty metabolism, are placed in the conditions most prone to induce degenerative changes in their walls. Watch a man's habits of eating and you can pretty certainly forecast the future of his arteries. Over-indulgence in foods, especially meats, have caused more deaths prematurely than alcoholic beverages, and in saying this I am not advocating bibulous habits.

4. The influence of heredity must not be lost sight of. Arteriosclerosis has been noticed as a truly family disease. The teachings of Sir W. Gowers on abiotrophy apply here. There are certain parts of us that tend to decay and grow old too soon. Such is seen in many nervous diseases and I think the same thing applies to the vascular system. Early senility, myocardial disease, cerebral hæmorrhage, bear evidence of the fact that there is an inherent lack in the vitality of the arterial system, indeed in the whole vascular system. The noble tissue has not enough vital rubber.

5. It is now quite established that long-continued exposure to cold and damp will cause the disease. These act upon the skin so as to cause high tension, as evidenced by the increased urinary

flow. There is also the retention of poisons in the system which the skin should eliminate.

6. Much has been said upon the effect of viscosity of the blood since Clifford Allbutt introduced the term. No doubt the blood does vary in viscosity. The thin blood of the anemic and the thick blood of the plethoric persons are well known. The tarry blood of the cholera patient will not flow at all through the small vessels. It has been proven by cryoscopy that the freezing point of blood varies a good deal, owing to the varying quantities of solid constituents therein. The normal freezing point is —0.56, and this is lowered in cases of arteriosclerosis, and has been found to run about —0.565 to —0.66. If the blood is viscous the heart will have more to do and there will be potential high tension.

7. Sex plays an important part in the causation of arteriosclerosis, or rather in the form of it. Men suffer much more frequently than women. The mode of life, work, habits, etc, etc., of men tend to produce the general form of the disease, whereas the more emotional nature of women is prone to give rise to the abdominal form of the trouble. When the life of a woman approaches in form that usual to men, she is liable to the general form of the disease. The sudden changes of blood pressure in women due to emotion affects the aorta and the arteries in the splanchnic area rather than those of the periphery.

8. We are all familiar with the effects of age. Gradually as the years go by the arteries lose their elasticity, and as they do so the heart has added work thrown upon it. It has been well shown, however, that this latter phase is lessened materially by the tendency of the inelastic vessels to dilate. The ages at which sclerosis comes on vary very much. It has been observed in a pronounced form in youth, and scarcely detectable at 80, due no doubt to the facts that the machinery was not overloaded on the one hand, and that it was kept clean of refuse and waste on the other.

9. Race and country conditions bear a close relationship to the causation of the disease. The negroes are prone to atheroma and sclerosis of the arteries. It is very common among whites in the United States. On the other hand, it is very rare among Orientals. Races and countries who live mainly on vegetable foods suffer but little.

10. A very important group of causes is the toxic. Over this phase of the etiology of arteriosclerosis much has been said and written. Its importance cannot be overestimated. Unless the thickening of the arteries is wholly due to high tension the qual-

ity of blood must be reckoned with as it flows in the capillaries and bathes every tissue. For the sake of clearness in stating the case, the toxic agencies may be divided into the following groups:

(*a*) The various infectious diseases, as typhoid fever, syphilis, rheumatism, the colon bacillus, and others. It has now been well established that typhoid fever and syphilis stand in very close relationship to arteriosclerosis as cause and effect. Lately some excellent work has been done on the etiological relationship of the colon bacillus to the sclerosis; but more proof is yet required before an opinion can be pronounced. In some way these infections throw into the blood toxines, or derange the metabolism of the body so as to induce the various changes in vascular sclerosis. Syphilis, according to Bromwell and Diver, cause a general arteritis, including the vasa vasorum.

(*b*) Certain agents introduced into the system have been said to cause arterial sclerosis. Among these may be mentioned lead, caffeine, theobromine, purin bodies, theina, adrenalin, glycohemia, mercury, alcohol, digitalis, ergot, and especially nicotin. These may act in two ways: first as poisons and irritants they act on the vessels, inducing arteritis; and secondly, by causing and keeping up prolonged high tension, which is admittedly a cause of sclerosis. The part played by alcohol is in dispute, but I think the consensus of opinion is on the side of it being a cause, notwithstanding the work of Cabot. The faulty metabolism present in gout is undoubtedly a cause; but this again resolves itself to the causes of gout, which are pretty much the same as those causing arteriosclerosis.

(*c*) Lately, much attention has been paid to the influence of the various glands of the body, such as the suprarenals, the hypophysis cerebri, the thyroid and the kidneys. There is now no doubt that the thyroid gland principle reduces arterial tension, and that the active substances of the adrenals raise it. The adrenalin does more than raise the arterial tension, and, in this way, cause sclerosis of the arteries. In addition to this, by acting as a toxic agent on the arterial walls and setting up an arteritis, it causes degeneration and calcification. It has been shown that adrenalin acts on arteries with vasomotor nerves, but the recent experiments of Barr and Hunter also show that it acts directly on the muscle fibres of the vessels. It would, therefore, contract the cerebral, coronary, and pulmonary arteries where the nerve supply is either absent or very slightly in evidence.

The high tension in myxœdema is no doubt due to the lack of the active principle of the thyroid gland. High tension may result, therefore, from defect, as well as from an excess of glandular activity.

It has also been proven by Batty Shaw that when the kidneys are inflamed an extract is given off from them that enters the blood and causes high tension. Here we have an explanation for the high tension in nephritis, and the arterial changes that are so constant in chronic Bright's disease. We can all recall the stop-cock theory of Sir George Johnston, but it failed to carry conviction to the minds of many pathologists. If Batty Shaw and others are correct in the view that the diseased kidneys send into the blood a powerful pressor agent, we can at once understand why the arteries sclerose in chronic Bright's disease. We must wait a little yet, but I think this is the true explanation. What I say here applies to high tension and sclerosis following renal disease, and does not imply that there may not be a reverse process, with high tension and sclerosis, prior to the renal disease. Batty Shaw has obtained a renal extract which causes high tension when injected into the blood of an animal. Schaefer, Oliver, Shaw and Barr have shown that there is a powerful pressor agent in the posterior lobes of the pituitary body. Whether it plays any part in the etiology of arteriosclerosis or not is not yet settled.

As to the varieties of the disease, different writers have given us different classifications. John M. Cowan, of Glasgow, divides the condition into the focal or nodular and the diffuse. Clifford Allbutt speaks of the toxic, the hyperpyretic, and the involutionary. Alfred Stengel gives us the presenile, which he divides into the acute and the chronic forms, and the senile. Joseph McFarland treats of the condition under the terms acute and chronic. Osler contents himself with the simple division into the nodular, diffuse and senile, while Edwards makes two forms, the nodular and diffuse.

On the morbid anatomy I shall say but little. Of the focal form of the disease I would call your attention to two types. The first is that of endarteritis obliterans. This form affects the smaller arteries, and is very frequently of syphilitic origin. The nodule may completely close the lumen of the vessel and in this way prove of extreme importance, shutting off the blood supply from the area of distribution. The keynote to the changes in this form is to be found in the words cell proliferation, with subsequent degeneration, though gross fatty and calcareous deposits of atheroma do not occur. Various infections, other than syphilis, as scarlatina, smallpox, enteric, etc., may cause this form, and it has been held that it may be caused by trauma. Thoma's theories suit this form only, if at all any form. The second type of the local form is what is called atheroma, or

endarteritis nodosa or deformans. These atheromatous patches are usually present in the elderly, though their size and number vary very greatly. They vary from that of a pin's head to plaques as large as a quarter of a dollar. They are usually of a greyish or yellowish color, but if calcified are whitish. Sometimes they are soft or translucent, often opaque and firm. Ulceration is not uncommon, from which may arise thrombi. The aorta suffers most frequently from this form of the disease. The coronary, cerebral and peripheral arteries are affected oftener than those of the viscera, the pulmonary circulation being least liable. In advanced cases all the coats are involved. The intima is always thickened. In the early stage, spindle, stellate, and round cells are scattered between the laminæ, while the lining endothelium remains intact. In the later stages, hyaline, fatty, granular, mucoid, or calcareous changes may be found. The elastic tissue shares in the hyperplasia and many fine fibrils can be seen. These in time undergo granular degeneration, and often break up into little masses. The media is thinned and the muscle fibres atrophied. The connective tissue is markedly increased, but the cellular elements are few. The vasa vasorum are frequently increased in size and numbers and may penetrate into the inima. In early cases the adventitia may be thickened and cellular, and in the advanced stage sclerosed with hyaline tissue and degenerate elastic fibres.

It cannot be held that these focal forms of atheroma are local forms of arteriosclerosis. The latter is associated with increased tension, while atheroma is commonly quite apart from this tension and cardiac hypertrophy. Infections can only be responsible for a small number of these cases, as no trace of infection may be discoverable in advanced examples of atheroma. The location of atheroma in the aorta, the coronaries, the vessels of the abdomen and the extremities goes far towards establishing the view that these focal forms are largely of traumatic origin. The many causes of high tension plus the systolic wave may produce damage to the vessel walls.

In the diffuse form all the arteries and capillaries, and, according to some, the veins, are involved. The vessels may be seen standing out, their lumen patent, and their walls distinctly and uniformly thickened. The larger vessels may appear whitish and translucent and their consistence firmer than usual, the aorta is thickened and may show many atheromatous patches. In the intima there is marked hypertrophy of the elastic fibrils, and there may be two or more continuous laminæ evident. In cases of longer standing, when degenerative changes have oc-

curred, the elastic tissue becomes granular, the connective tissue hyaline and nucleated, but fatty and calcareous changes, so common in the patchy form, are rarely seen. In the media there are always changes. It may be simply thickened with an increase of its muscle, elastic, and connective tissues. Sometimes it is thinned with atrophy and fatty changes in the muscle fibres. In other instances the connective and elastic tissues are in excess, but the muscle fibres are degenerate and few. The connective tissue is usually hyaline or granular, and nucleated, and the overabundant connective tissue degenerate and granular. The adventitia in the early stage is thickly nucleated, while in older cases it is usually hyaline and sparsely nucleated. The elastic tissue is excessive.

The changes in the adventitia are usually constant. If the media is thickened and fibroid the intima may be little altered, whereas if the intima is atrophied the media is usually hypertrophied. Medial hypertrophy is usually present throughout the entire arterial system, with a tendency to fibroid changes.

In the capillaries certain changes are observed. Their walls on section present a double contour, they may be several times their normal thickness, and the lumen is somewhat narrowed.

The diffuse form of arteriosclerosis is frequently found in connection with renal disease, but may exist independenly, the common feature of the condition being continued high tension, which Cowan thinks must be accepted as the immediate cause, though Professor Lindsay holds that a toxæmia is the more important factor. In other words, Cowan contends that the high tension, however caused, gives rise to the arterial changes, whereas Lindsay and others hold that the toxic agents in the blood cause much of the alterations from the normal by perverting the nutrition. This leads to hypertrophy of the media and adventitia, and to irritation and cellular proliferation in the media. These nutritional changes may be accelerated by the quality of the blood contained in the vessels and fed to them through their vasa vasorum. The diffuse forms of arteriosclerosis are manifestations of a general disease, and in this respect differ from the focal forms of atheroma.

My own opinion is that when degenerative changes commence in the arterial walls it is the elastic tissue which suffers first. The nutrition of this tissue is less stable than that of the muscular elements, and will be the first to give evidence of a departure from the normal. I am quite satisfied that this degenerative process may be caused by toxic agents in the blood affecting the vitality of the elastic tissue, or by hypertension,

either continuous or interrupted, interfering with its blood supply and proper periods of rest.

The clinical course of arteriosclerosis varies much. In some case it is fairly acute, while in others it is extremely slow in its advance. Not having too close regard for the senile type, we must be on the alert for vascular changes in those of mid-life, or the presenile form. It may show its worst effects in the aorta or coronary vessels. The terrible effects of disease of the coronary arteries on the myocardium are only too well known. Early in the case there is frequently a sense of oppression over the thorax and a feeling of dyspnœa, which later on may become typical angina.

The arteries of the brain and cord may undergo the main degeneration. During the progress of the vascular changes there may be transient monoplegias, extensive palsies, convulsive attacks, or generalized epileptiform seizures. There may be steady loss of memory and mental capacity. In the cord, attacks resembling myelitis may occur.

Many of the cases of chronic renal disease are arterial in origin. The disastrous effects of degeneration in the blood vessels on the digestive organs are now beginning to be fully appreciated, and should be sought out, and properly treated. Diabetes has been alleged to be due in some instances to sclerosis of the pancreatic arteries.

Arising from the diffuse form of arterio-capillary fibrosis, we have a variety of anæmia that has been styled pseudo-anæmia. There may be also a gradual loss of weight, and a tendency to digestive derangements. The nervous system does not escape. Attacks of pain, especially in the head, are not uncommon, and severe forms of neurasthenia are admittedly due to it.

As disease of the arteries kills a few in the early periods of life, many in mid-life, and most of us in advanced life, it behooves us to be on the lookout for its first manifestations.

The diagnosis is easy in the advanced cases, more difficult in the middle stage, and very difficult in the inception of the trouble. But if our treatment is to be of much avail, it is here that the diagnosis must be made.

There are four symptoms for which we must be on the watch. These are increased blood pressure, an increased heaviness and lengthening of the first heart sound, an accentuated second heart sound, and an increase in the tidal wave of sloping ascent and delayed decline. But we must remember that in tumor of the brain, in some diseases of the lungs, in overwork, in toxæmia, and in nervous strain there may be prolonged high tension with-

out sclerosis; and so we must be on our guard. But as high tension usually precedes the sclerosis, if we treat the tension we may never be called upon to treat the sclerosis. Add to these symptoms the gradual failure of vigor, the presence of pseudo-anæmia, the increased flow of urine of low specific gravity, and the presence of the well recognized etiological factors, and it will be within the range of possibility to make a working diagnosis of reasonable certainty.

If we have not been able to follow Thoma in all his views on the pathology and morbid anatomy of the changes in the arterial system in sclerosis, we can concur in the following statement: "By avoiding the causes of increasing blood pressure, by proper hygiene and regimen, serious and fatal vascular disease might be anticipated. If it became possible to recognize arteriosclerosis sufficiently early, it would be easy to limit the danger of rupture of blood vessels and aneurysmal formation."

From what has been said the treatment will be readily surmised. In the first place, reduce the strenuousness of life. Take off some of the load, and this applies to mind as well as body.

On the matter of diet much has been said, and yet it all comes down to this—moderation. Let milk and vegetables, as urged by H. Senator and Schroetter, constitute the basis of the dietary. I would urge the elimination of all alcoholics. Tea, coffee, and tobacco, if taken at all, should be taken in great moderation. The effect of a pipe in raising tension is unmistakable. Butcher meats and meat soups had better be left largely alone. All the proteids required can be obtained from the vegetable world.

Among the drugs, many have been vaunted. The chief of these are iodides, the citrates, the benzoates, the sulphates, sulphites, the nitrates and nitrites. There appears to be a widespread belief in the efficacy of the iodides, and, though some claim that they are of no value, I cannot concur in this opinion. Though it is not a drug, yet it may be mentioned here. It is held by high authority that chloride of sodium is a pressor agent and ought to be used with much care, and calcium chloride avoided. Of late Poehl's sal physiologicum, Trunececk's serum, antisclerosin, and arteriosclerosis tablets have been advocated. They all contain mainly sodium chloride, sodium sulphate, sodium phosphate, sodium carbonate, magnesium phosphate, and glycerophosphate of calcium. The nitrites and nitrates are helpful, and calomel in half-grain doses for a week and intermit, then giving it again, is a good remedy.

The proper regulation of exercise must not be omitted. An

indolent life is most injurious to these cases, and the proper taking of baths, especially warm to hot baths, is most useful. Early rising should be encouraged. Severe cases are greatly benefited by a period in bed.

Of one agent in the treatment of high tension I wish to say a word. Too little attention has been devoted to the use of the thyroid gland extract. Of all the means which we have at our command for the control of high arterial tension, I know of none equal to it.

Two classes require special mention, the obese and the diabetic. In the former, sugar, starch, and farinaceous food must be excluded and more proteids allowed. In the diabetics with sclerosis nitrogenous foods must be given more freely, while the carbohydrates must be carefully restricted. For these two classes milk, some lean meat, gluten bread and green vegetables must be the mainstay in diet. Some egg may also be permitted.

In the words of W. P. Heringham I conclude: "Meanwhile there is one lesson that middle age has always to learn, and that is that it must be moderate, and that moderation means for it something very different from the ordinary meals of healthy and active youth."

"Ill fares the land, to hastening ills a prey,
Where wealth accumulates and men decay."

Progress of Medical Science.

MEDICINE.

IN CHARGE OF W. H. B. AIKINS, F. A. CLARKSON AND BREFNEY O'REILLY.

Arterial Tension in Typhoid.

In the *British Medical Journal* of Oct. 19th, a review appears of an article by Huchard and Amblard, referring to the sudden rises in arterial tension noted by them in enteric fever, and its results. As a rule the pressure in typhoid is low; the sudden rises noted by them, accompanied by gallop rhythm, have preceded, in the cases observed, either hemorrhage or perforation; this rise is somewhat transient, a slowing of the pulse rate, a bruit following the first cardiac sound (the muscle stopping short in its contraction, not relaxing, seemingly taking breath, as it were, before completing the systole and accomplishing it by a double contraction; the authors do not believe this to be the reduplication of the second sound noticed by Hayem in typhoidal myocarditis) are the sounds present. Following the hemorrhage or perforation a subsequent fall of tension with small rapid pulse appeared.

The sudden rise may be reflex and due to irritation of the ulcerated intestine or to a sudden increase in the typhotoxine.

Chilblains.

Ritter directs attention to the use of Bier's method of artificial hyperemia for the relief of chilblains, and has obtained excellent results in over 150 cases. It was first brought to his notice during the treatment of a tuberculous arthritis in a patient suffering from chilblains. The latter completely recovered during the application of the constricting bandage; he subsequently used it in frost-bite with similar results. He points out that hyperemia of cold is not a stasis but a real congestion, or mild inflammatory reaction whose function is to aid in the repair of the tissue damaged by cold; if it is possible to increase the hyperemia, nature will be materially aided, and this is effected by the use of the artificial method of Bier. It is not always possible to produce a passive hyperemia in anemic persons, so that it

is found that Bier's bandage is most effectual in acute and chronic cases occurring in healthy individuals. In the long-standing lesions the use of hot air (by producing an artificial hyperemia) is the most successful; under either treatment pruritus is alleviated, the tissues become more pliable, the chances of gangrene are thereby lessened, and finally the disease is brought almost invariably under control.—*B. M. Journal.*

Rheumatoid Arthritis.

A very interesting article by Luff appears in the *British Medical Journal* of October 26th, 1907, on the above subject. He believes it to be a definite clinical entity and to be separated from several other infective joint lesions; to be due to micro-organisms, probably gaining entrance to the blood from foci in the alimentary canal, and consequently it comes under the head of a general constitutional disease, the joint affection being merely one of the symptoms, and it is here that the nidus suitable for the propagation of the organisms is found. During the growth of the bacteria inflammatory changes occur in the joint tissues. Toxines are produced which probably are responsible for the nervous and vaso-motor disturbances (such as localized sweating and pigmentation) encountered. Further proofs of its infective character are the febrile excursions and the rise in the pulse rate.

In the early stages it very closely resembles subacute rheumatic fever, but is distinguished from it by not reacting to salicylates; it also usually commences in one joint, frequently in those of the fingers, thence becoming rapidly polyarticular. The apparent cases of monarticular, rheumatical arthritis Luff believes to be traumatic in origin, and to these cases suggests applying the term osteo-arthritis.

The acute and chronic forms differ merely according to the virulence of the infective agent. The former is most frequent during the earlier decades; the latter may follow an acute attack, or may be chronic from the commencement, and is prone to attack females near the climacteric. Either form may be precipitated by trauma. In the acute cases the synovial membrane is selected for the attack. If the disease persists the remaining joint structures become involved. Heberden's nodes represent the mildest form and are essentially chronic. The disease is usually a primary disease; rheumatism, influenza, gout, etc., may act as predisposing factors. As regards the treatment, a liberal diet is essential (thus diagnosis from gout is of the utmost importance). Wine or stout should be taken in moderation, and every effort

made to build up the constitution. As regards drugs, guaiacol is the one on which Luff pins his faith. Its effects are enhanced by the addition of potassium iodide to the prescription. It probably acts as an intestinal antiseptic and after absorption inhibits the action of the bacterial toxines. The iodide assists by promoting absorption of the hypertrophied joint tissues. Guaiacol carbonate is administered in increasing doses (in cachets) up to 20 grains three times daily and continued for at least 12 months. In addition, massage, tonics, superheated air, and electric light baths may be employed. A dry climate, as that of Egypt, will also greatly aid in the regimen.

Cranial Tumors.

Risier Russell's opening paper in the Medical section of the British Medical Association deals with the indications for operation in the above. He deplores the increasing tendency of the profession to believe that operation is useless, due partly to wrong diagnosis, ill selected cases, and reports which include in the mortality percentage cases operated on in which no tumor existed; one great reason that better results are not obtained is the fact that the diagnoses are made too late for operation to be of use.

Russell then discusses the differentiation of hysteria (with blindness, coma, convulsions or paralysis) from cerebral tumors, epilepsy, general paresis (especially with growth in the frontal lobes), disseminated sclerosis (here the resemblance to tumors of the cerebellum and mesencephalon may be marked) and cites several individual cases.

Operation may be considered, providing accurate localizing signs have been discovered, and the tumor be accessible to the surgeon; the probability of the form of tumor now receives attention, if encapsulated or otherwise; if non-malignant or liable to recurrence; if the tumor be metastatic, or finally if the growth be a result of syphilis. In the latter class we may find cases in which medical treatment has no effect, and here it is the surgeon's duty to interfere. Untoward results, as sepsis, shock, paralysis, and the advisability of performing the operation in one or two stages, must all receive attention. Operation may be justifiable merely to prolong life or to relieve distressing symptoms, as vomiting, paroxysmal headaches, etc.; and more important still is the relief of optic neuritis, given by trephining, when it is due to intracranial pressure. Lumbar puncture is a procedure to be employed only for diagnosis or the relief of urgent pressure symptoms.

Scarlatina and Duke's Disease.

Cotton's description of the above in the *Journal of the American Medical Association* is briefly as follows: In Duke's disease, the fourth of the exanthemata, the incubation period occupies from one to three weeks (prodramata frequently being absent), and the infection lasts from two to three weeks. It is apparently less contagious than measles, being on a par in this respect with scarlatina. The rash is usually the first manifestation. It almost always appears just on the face, spreads downwards, in a few hours covering the trunk and portions of extremities, avoiding the flexure and being more pronounced over areas liable to irritation or pressure; fine points may appear quickly merging into general hyperemia, rarely small normal patches of skin are defined. There is no oro-nasal pallor or pruritus, and the feeling of heat in the skin is absent; the color of the rash closely resembles scarlatina, fading rapidly in two or three days without staining. A fine branny desquamation usually takes place (contrast the flakes of scarlet fever). The throat is normal, except for slight hyperemia. Lymph nodes may show slight enlargement. The tongue is negative, and finally the febrile reaction, though marked, subsides with the rash. The course is mild and sequelæ are the exception.

In contrast to scarlet fever he notes (1) long period of invasion, (2) absence of emesis, (3) moderate fever of brief duration, (4) normal pulse and temperature ratio, (5) absence or fine character of desquamation, (6) negative tongue and fauces, (7) absence of leucocytosis and sequelæ.

Finally, when one or more apparent cases of scarlet fever occur in a family, who have already been sufferers of scarlet fever, Duke's disease may be suspected.

OBSTETRICS AND GYNECOLOGY.

IN CHARGE OF ADAM H. WRIGHT, K. C. M'ILWRAITH, FRED. FENTON AND HELEN MACMURCHY.

The Early Diagnosis of Tubal Pregnancy.

In nearly every case of ectopic gestation a presumptive, if not a reasonably certain diagnosis, may be made before the onset of alarming symptoms. The condition may be divided into two stages —tragic and non-tragic.

The Non-tragic Stage.—The following conclusions are based mainly on a study of more than 130 patients operated on, and a few who died without operation, the diagnosis being confirmed by necropsy. More than 90 per cent. of the 130 patients consulted a physician for symptoms referable to the pelvis before the tragic stage was reached. A large proportion were told that ordinary abortion was threatened, was occurring, or had occurred. About 20 per cent. were curetted for the metrorrhagia, the cause not being suspected. Of the patients who consulted a physician, some were confined to the bed or couch for days or even weeks before tragic symptoms occurred. Except for brief intervals—an hour, or a few hours or so—in a large proportion of the cases the patients pursued their usual vocation during the non-tragic stage without material or prolonged interruptions. Only about 20 per cent. of the physicians consulted made a correct presumptive diagnosis.

It is easy to arrive at a presumptive diagnosis of ectopic gestation. When any female after puberty and before the menopause, who has menstruated regularly and painlessly, goes over the time at which menstruation is due, sees a discharge of blood differing in quality, color, quantity, or continuance from the usual flow, and has pains, generally severe in one side of the pelvis or the other or possibly in the hypogastric region, ectopic gestation may be presumed. The two points of greatest value in making a presumptive diagnosis are: (*a*) Atypical menstruation or metrorrhagia; (*b*) pains.

Menstruation.—The expression "atypical menstruation" although a misnomer, is useful. The flow may be continuous or interrupted. The amount of blood lost may be much greater or much less than that of the usual menstrual flow. It may be darker or may be lighter or more brownish than the usual menstrual blood. The metrorrhagic blood of ectopic gestation often has a sort of slippery character, which the writer is unable to describe but which is almost diagnostic.

A careful history is of great importance. None of the points in the following schedule should be omitted: 1. If the present or last menstruation was out of type, write the date of its beginning, its continuity, its interruptions; note the quality, the quantity, and the character of bleeding. 2. Note the date, duration, amount and character of the menstruation preceding the atypical menstruation. 3. Note the date, duration, amount and character of the second last menstruation preceding the atypical menstruation. 4. Note the date, duration, amount and character of the third last menstruation preceding the atypical menstruation. 5. Note the date of each attack of colic, or series of attacks, and the date or dates of any recurrences.

If the patient has been accustomed to painful menstruation, analyze the character of the dysmenorrhea and ask particularly if the pains which appeared in connection with the discharge this time were of the usual character. In tubal gestation, if the patient is intelligent, she will at once say that she never had pains like these. She will state wherein the pains and the flow differ from those of the previous and painful menstruations. If you are the second physician in the case, and the first one is reported to have said that the woman had a miscarriage and is still bleeding and has pains, be slow to accept such statement, unless a fetus has been seen. If it has been seen, obtain if possible a description of it.

Pain.—If the attacks of colic are very severe with steady pain between them, the abdominal walls may be rigid. The attacks in the beginning of tubal pregnancy are often mistaken for intestinal pains. They may not cause the patient to rest more than momentarily from her work. In other cases the pains are so severe that the doctor is sent for, whatever the time of day or night. Soreness of the abdomen may pass off in an hour or less after a severe attack, or be so prolonged as to prevent the patient from walking for a day or two or longer. Occasionally jars of the body in walking, or being much on the feet, cause so much pain that the patient remains in bed for a while. In such cases the attacks may return after shorter or longer intervals.

The pulse usually remains about normal.

The Tragic Stage.—There are severe attacks of colic, pallor, weak and rapid pulse, a fall of temperature one, two or three degrees below normal, rapid breathing, fainting, generally vomiting and restlessness, and sometimes a lethargic condition from which the patient may be aroused. The pulse may be anything from 120 to 180. It may not be possible to count it at the wrist, although its flickerings may be perceived until shortly before death.

Physical Signs.—No disease produces in the pelvis such a variety of signs. The uterus is always enlarged in a slight degree at least, but it seldom is much enlarged unless a considerable decidua is formed. The cervix generally is not altered but there are some exceptions. It is sometimes much softened. Unless hematocele has formed the mobility of the uterus may not be particularly affected. If the uterus is lifted on the examining finger pain is almost always produced on the side of the pregnant tube.

In the non-tragic stage the tube is usually sufficiently large to be palpated on bimanual palpation. The diagnosis may be made when the tube at its largest diameter does not exceed 1-2 in. The tube may enlarge to a size of 2 in. or more.

It is not likely that the simple growth of the fœtus within the tube causes pain. Whenever pain is felt probably hæmorrhage has occurred within the tube. A pregnant tube is always tender when squeezed. The tube may be imbedded in blood clots, or so displaced or engulfed in hæmatocele, that its form and size are indistinguishable.

If a large hæmatocele has formed the uterus may be carried far upward and almost out of the pelvis. When thus lifted it is generally pushed to the opposite side. The uterus may be so far pushed up that the cervix will with difficulty be reached per vaginam. The corpus and fundus uteri resting on the outer and anterior surface of a large hæmatocele may be distinctly palpated through the abdominal wall.

Haematocele.—A hæmatocele is sometimes very hard, but it is soft and boggy generally. When hæmatocele forms and materially displaces the uterus, frequent, difficult, or painful micturition may occur. The formation of hæmatocele generally marks the presence of alarming symptoms and, consequently, the tragic stage.

The treatment is immediate operation, whatever the stage.—*Philander A. Harris, Abstract Jour. Amer. Med. Assoc.*

Treatment of Post-partum Haemorrhage.

In cases of post-partum hæmorrhage due to atony of the uterus, Stowe has tried with great satisfaction a method of hæmostasis, which he has not seen mentioned in the literature. In several instances he has been able to arrest completely a profuse hæmorrhage. A sterile towel should be placed over the abdomen, or if this is not at hand, a laundered towel, soaked with a 1 to 1000 solution of corrosive sublimate, acts as a good substitute. Now the external hand grasps and firmly kneads the

fundus and presses it down into the inlet. The other hand, incased in a sterile glove, is passed into the vagina up to the cervix. The fingers then attempt to seize as much of the cervix and lower uterine segment as possible, and the hand is forced far into Bandl's ring until the fundus is reached. The internal hand remains outside the uterine cavity throughout the operation. If sufficient pressure be used the internal hand can be forced well into the fundus and past the contraction ring, pushing the cervix and lower uterine segment before it against the walls of the fundus. This obliterates the cavity of the uterus, and brings direct pressure and compression to bear against the sinuses and open vessels. The position of the internal hand or fist in the fundus, yet outside the uterus, has a marked effect in stimulating contraction, especially when aided by brisk massage.—*Surgery, Gynecology and Obstetrics.*

Management of the Puerperium.

At a meeting of the New York Obstetrical Society held November 12th, a very interesting discussion took place on the "Management of the Puerperium." From the report which appeared in the *American Journal of Obstetrics,* January, 1908, we extract the following:—

Lacerations of the Cervix.—The question of the immediate repair of lacerations of the cervix is still under discussion. It is argued that if the perineum should always be repaired, so should the cervix, and for the same reasons. I follow the teachings of the majority of obstetricians who repair the cervix only when lacerations are extensive enough to cause hemorrhage. A great majority of labor cases have lacerations of the cervix which are sometimes quite extensive and we know that most of these undergo a good deal of spontaneous repair. While the immediate operation is usually quite easy to perform, sometimes it is very difficult. The swelling and bruising of the cervical tissues immediately after labor make the prognosis uncertain. Sutures placed too close together and tied tightly may interfere with the lochial discharge and cause retention, with temperature and other constitutional symptoms. The difficulty of the technic and the liability of sepsis outweigh the advantages of immediate repair and make the routine performance of this operation inadvisable.

On the other hand, one or two plain catgut sutures placed high in the angle of a torn cervix, is the best means of arresting hemorrhage from this situation and is infinitely more satisfactory than packing, which is so often resorted to.

Tears in the anterior vaginal wall are most often due to projecting blades of forceps, and should always be immediately repaired.

Subinvolution and Displacements.—Perhaps the most important part of the management of the puerperium is the routine practice of making a careful physical examination at the end of the fourth and six week. If the uterus is found to be too large, this is the best time for treatment. The results of tampons of boro-glycerine or tannic acid and glycerine used from the fourth to the sixth week, are astonishing. The large flabby uterus is quickly reduced in size. At times the improvement can be noted from one application to another at intervals of only three days. It is rarely necessary to continue treatment for more than two or three weeks. I always use, in addition to the tampons, strychnine and ergotin internally, and hot douches.

Backward displacement of the uterus is very common after labor. It may be suspected in any case where there is a return of the lochia when the woman first begins to sit up, and is often a part of the subinvolution. The diagnosis is easily made by a bimanual examination. The causes are indefinite and its prevention very difficult. I have seen it in cases where the utmost care was taken in every detail. The influence of a tight binder I think has been much exaggerated. The most frequent cause, to my mind, is constipation and consequent straining at stool, to which all postpartum women are subject during the puerperium. The bowels should be carefully regulated by cathartics and if patients are obliged to strain, an enema should be given immediately. Nurses should be instructed in regard to the danger of allowing patients to strain and preparations made so that an enema can be given promptly. A patient should be instructed to lie flat on the abdomen for ten or fifteen minutes at a time at least twice during each twenty-four hours, during the latter part of the puerperium.

A short time ago, I examined a patient four weeks after a normal confinement and found everything in perfect condition. The next day she complained of pain in her back and I found the uterus over backwards, and a history of an unusually constipated movement, which immediately preceded the pain.

The treatment, as a rule, is very satisfactory. Briefly outlined: If discovered at the fourth week, a simple replacement and treatment by glycerine tampons for about two weeks. If the displacement does not recur, this is all that is necessary, as with the involution of the uterus, the tendency to the displacement grows less and less. A few minutes in the knee-chest

position every day has seemed to me a wise additional precaution. In cases in which the displacement recurs, or in which it is first discovered six weeks postpartum, the treatment is replacement and a pessary. I now make it an arbitrary rule that a pessary is contraindicated before the sixth week, as interfering with normal involution and not to be compared in value with tampons. The best form of pessary is a simple ring which is easy to introduce and performs its work admirably. It should be worn about two months or a little longer, and then removed tentatively. In about 80 per cent. of my cases, the position of the uterus remained forward after the pessary was removed.

Three or four days after the removal of the pessary, an examination should be made, and again after an interval of a few weeks. If the uterus is found normal in position, the case may be discharged. If the displacement recurs, the use of the pessary must be persisted in for about six months.—Austin Flint, jr., M.D.

For many years it has been my custom to administer small doses of ergot throughout the ten days of the puerperium. I find that with such treatment involution is quicker, there is less lochia and from keeping the uterus well contracted there is less disposition to septic disturbance. Where there is a contraindication to its use, as shown by the occurrence of severe afterpains a short time after it is given, or where the stomach rebels, or where by its general effect on the vaso-motors it causes an artificial anemia as shown by dizziness, cold, clammy skin and weak pulse—here we use one or other of the alternates, strychnine or fair doses of quinine at regular intervals. After-pains are in a majority of cases to be considered as normal, especially when they occur in a multiparous woman, less often do they present themselves in the primipara. In most cases they can be readily controlled by keeping the uterus as empty as possible by a careful Crede performed every day, and by placing the patient in the semi-inclined position for purposes of drainage. Medically I find nothing better than the administration of 10 grains of chloral every hour until relief is afforded. Opium and its derivatives are of value but for many reasons are to be withheld. The most useful drug of this class is codeine in doses of from one to two grains by the mouth or the rectum. Gelsemium and bromides are of value where other measures fail. If a pathologic condition is at the bottom of the trouble, and especially if general disturbances arise, the case assumes another aspect and must be treated according to principles foreign to this paper.

With the giving of a free diet we find that the bowels usually move at the end of twenty-four hours without artificial means—but if this does not happen then the time-honored castor oil is given on the evening of the second day. Except with a complete laceration into the rectum this is our invariable rule. With extensive lesions of the perineum, we move the bowels on the morning of the fifth day, giving the evening before a retained enema of sterile olive oil.

We allow the parturient to assume any position that is the most comfortable for her, the presence of lacerations being no contraindication to such movements. We gradually allow her to assume the semi-inclined upright position, favoring this as early as the third day for purposes of drainage. Especially do we wish to avoid the enforced dorsal posture because of its deleterious effect on posterior displacements of the uterus. We are much more strict in allowing women out of bed and the rule is to keep them in bed until the lochia has become white. To get women up on the second to the fifth day is as senseless as dangerous. On two occasions I have seen women apparently normal suddenly die of a pulmonary embolus on the seventh day.—Simon Marx, M.D.

Treatment of Cracked Nipples.

Roudaud (*Journal de medecine de Paris,* October 6, 1907) directs attention to the importance of treating the nipples during the last month of pregnancy. They should be washed daily with soap and water, and kept covered with a dry dressing. There is no need of other treatment. After delivery, special attention should be given to them. After and before each nursing, they should be carefully washed with a mild antiseptic solution (boric acid in water, or brandy and water). It is not advised to have a wet compress, for fear it might cause maceration of the epidermis. Between the nursings, a dressing made of three thicknesses of sterilized gauze is kept applied, over which a layer of absorbent cotton is laid, and a bandage pinned over to keep it in place. The mouth of the child should be washed out before nursing (with a tampon of cotton moistened with boric acid water). This is to prevent infection of the breast. In case of pain, the glycerite of starch may be applied to the nipple and covered with dry gauze. Before presenting the nipple to the infant, it should be carefully washed with boiled water, to which some hydrogen peroxide may be added (half and half). After nursing, the washing should be repeated, and the breast covered with cotton, and confined with a bandage. The rubber nipples,

on account of the difficulty in keeping them clean, should be avoided as much as possible.—*N. Y. Med. Jour.*

Diagnosis of Early Pregnancy.

I never examine a patient for pregnancy unless she is reasonably sure she is at least six weeks pregnant.

The first noticeable sign after the suppression of the menses (which is not a certainty) is the slight changes in the breasts. At six weeks the breasts in a first pregnancy are slightly fuller than normally, and there may be a little tenderness, usually a slight darkening. At eight weeks the ring about the nipples is wider and darker. This is not noticeable in multiparæ at so early a stage. At six weeks the uterus will be slightly lower than a normal nongravid uterus, the neck will be shorter and the fundus broader. During the first three months the uterus is abnormally low, producing the "flat belly" of pregnancy.

At eight weeks in a primipara this shortening of the neck and broadening of the fundus should be noticeable to the most casual examiner. In a woman who had had several children in rapid succession, I would want two weeks longer before being certain of my diagnosis.

At two months the color of the uterus has begun to show a difference, changing from the normal pink of a healthy uterus to a darker shade, gradually growing purplish as gestation proceeds. To the examining finger the uterus gives a different touch. The normal nongravid uterus gives to the touch a sensation like touching the end of the nose. The gravid uterus is softer, feeling more like the lips. When I find a soft uterus I never hesitate to say "you are pregnant." I know of nothing else that softens it.

Therefore I would call the early signs, darkening of the breasts; broad fundus, short neck, change of color in the uterus, and most certain of all change of touch. There is usually considerable discharge after the first month.—*Dr. H. Hooper, N. Y. Med. Jour.*

Pubiotomy.

Dr. Fry, of Boston, in an excellent paper on Pubiotomy (*Surgery, Gynecology and Obstetrics*), after describing the operation, concludes as follows:

Pubiotomy is a satisfactory operation, so far as the operation itself goes, for enlarging the pelvic girdle in moderate degrees of pelvic contraction. It is easy to perform and can be employed in simple flat pelves with a conjugate vera of 7 to 7 1-2 cm. Separa-

tion of the severed bone for 4 or 5 cm. is usually sufficient to enable easy extraction with forceps.

The principal objection to the operation is the difficulties encountered in the after-treatment. They are little, if any, less than those which brought symphysiotomy into disrepute. The pelvis must be immobilized and the patient kept in the dorsal position several weeks. Maternity institutions can overcome the objection to a large degree by the use of a special bed, as the hammock suspension bed described by Ayres. Williams used the Bradford frame after two of his operations. Jewett employed an ordinary hospital stretcher "the poles of which were lashed to the top rails of an iron bedstead. A trap-door was provided for the dejecta." Montgomery recommends a pelvic sling suspended from the ceiling and attached to a compound pulley. Ordinarily, after pubiotomy and symphysiotomy, the evacuations of the bladder and bowels are attended with discomfort, and it is a hard task for the nurse to keep the parts clean, which is the more important after secondary operations where the patient is already septic and the soft parts contused and lacerated.

In consequence, therefore, of the unsatisfactory convalescence after pubiotomy, the operation will obtain in this country a limited field of usefulness as an elective operation.

Placenta Praevia.

O. Burger and R. Graf state, that after a review of cases of placenta prævia treated at Schauta's clinic, they are inclined to oppose the use of Durhssen's vaginal Cæsarian section as a method of treatment of these cases; first, because their material showed good results with other methods; and secondly, because of the hemorrhage which must necessarily accompany the vaginal section, and may be the cause of serious consequence in such exsanguinated patients. In addition to this, they oppose the operation because they believe that infection may easily take place from incisions made in such vascular tissues as the lower uterine segment. They grant that the prognosis for the child is better when the vaginal Cæsarian section is carried out, but are not willing to give this too much importance because in these cases, so frequently, the child is moribund.

After careful comparison and study of their statistics, they conclude that it is safest to do the combined version, without completing the extraction, following a preliminary dilatation of the comparatively narrow birth-canal with the colpeurynter. The results they have obtained thus compare very favorably with other statistics, especially when the danger of hemorrhage and

infection in such cases is considered. The prognosis as to the children they hope will be improved, but do not believe that it will be by any radical operative procedure; and further, it should not be at the expense of the mother's life.—*Zur Statistik der placenta praevia. Monatschr. f. Geb. u. Gyn.*

PSYCHIATRY.

IN CHARGE OF DR. J. G. FITZGERALD,
Clinical Director and Pathologist, Toronto Asylum.

The Relation of Immigration to the Prevalence of Insanity. By Thomas W. Salmon. *American Journal of Insanity,* July 1907, pages 53-71.

The features of psychiatric interest in the question of immigration are here dealt with, in an article which deals quite exhaustively with several phases of the problem. That a large number of insane and defective are bound to be included in the tide of immigration is but natural; that this question requires urgent attention on the part of those who have to do with the medical inspection of recently arrived future Canadians, has already been emphasized in a recent number of the Bulletin of the Toronto Hospital for the Insane.

The growth of immigration to United States has become so great that it is now the chief source of population, and owing to the changed sources of immigration a remarkable transformation in the composition of our foreign-born population is in progress. In New York State which receives more than one-third of the yearly quota of the "new immigration" the ratio of the insane to the total population has risen from one in 675 in 1875 to one in 294 in 1905. In 1906 46 per cent. of the whole number of patients admitted to New State Hospitals were of foreign birth, while the whole foreign population was but 26 per cent. of the whole population of the State.

These figures establish an obvious relation between the rising ratio of insane to population, and the increasing proportion of foreign-born patients in admissions; and therefore it is desirable to collect information regarding the insane immigrants arriving at the present time, and the most recent foreign-born admissions to public institutions. To do this two groups of 100 cases are taken—one group consisting of consecutive cases of insanity detected at Ellis Island by medical officers; the other group from

consecutive cases of insanity in aliens deported from public institutions. An examination of these cases shows that there is a higher proportion of women than men in the foreign-born insane; that there is a strikingly large proportion of young people among insane emigrants, the average age being 23.2 years, at which age the normal expectation of life is 38 years, and therefore these patients with incurable forms of mental disease are a source of great cost to the public.

A series of tables based on the nativity and race of these immigrants proves that the prevalence of insanity among the Irish in United States has no parallel in the world; that England too, has furnished a greater proportion of insane immigrants than it has of the total immigration, and that the practical cessation of German immigrants makes it certain that the future prevalence of insanity among the foreign-born will not be greatly influenced by immigration from that country.

Attention is called to the enormous increase of Hebrew immigration, amongst whom no matter in what part of the world they live, insanity is especially prevalent.

It is probable that in future medical officers will be stationed abroad, at the chief ports of departure, to examine intending immigrants and to intercept those suffering from mental disease.

A second series of tables deals with the type of mental disease found in these patients. Five per cent. of the cases in which the diagnosis was made and several cases not diagnosed were of the manic depressive type.

In 37 per cent. of the aliens deported from the institutions who were not insane at the time of their arrival, but who developed their psychosis from causes existing prior to their arrival, the etiological factor given was "constitutional inferiority," or "congenital defect;" even where this mental inferiority was apparent to the officers, under the present law these immigrants cannot be excluded, because they do not come under the legal definition of "insane."

The Cerebro-Spinal Fluid in Paresis, with a Special Reference to its Cytology. By William Burgess Cornell. *The American Journal of Insanity,* July, 1907.

In the mass of literature which has recently appeared on Lumbar Puncture, this article of Cornell's stands out as an excellent example of a piece of work that is highly valuable because of the information it conveys to the general practitioner.

The year 1901 marks the general use of Lumbar Puncture in neurology and psychiatry. Since then, from all sides a mass of

literature has accumulated, the size of which may be well estimated in Kaupe's catalogue review, in which he gives 487 references from the literature of 1904-5 on this alone.

The characteristics of the normal fluid are: It is clear and limpid, specific gravity 1007; total quantity, 60 to 80 c.c. It contains not more than 5 leucocytes to the mm.; is slightly alkaline in reaction, and it has 1 per cent. of solids. Globulin is present, but albumin does not normally occur.

The pressure of the fluid in normal individuals averages about 125 mm. of water in lateral decupitis, and 400 in the sitting posture.

A detailed description of the technique of obtaining the fluid is given. To count the cells Unna's polychrome methylene blue stain is used for differentiation. The undiluted stain is drawn to the 0.5 mark in the ordinary leucocyte pipette, which is then filled with the cerebro-spinal fluid.

After shaking, it is allowed to stand five or ten minutes, when the cells are well stained. The tubing is now carefully shaken again and after rejecting the first two drops, a third is placed on a special counting slide.

The method of counting is similar to that used in making an ordinary blood-count. The presence of serum-albumin is detected in the following manner: Equal parts of the fluid and a saturated solution of Ammonium sulphate are shaken together and the precipitate-globulin is filtered out. The clear fluid is then acidified with acetic acid and boiled. If the albumin is considerably increased a gross flocculent precipitate results. If only slightly increased a well marked turbidity is noted.

The writer draws the following conclusions from his series of cases:

1. Every case of paresis exhibits a spinal leucocytosis and increase of albumin.

2. This sign is also from point of view of its constancy, in all probability the earliest.

3. The diagnostic value of a negative puncture is often of greater value than a positive one.

4. The cell counting method with Fuchs and Rosenthal's slide is more accurate and rapid than the centrifuge technique, and has the great advantage in permitting comparative results.

5. The use of Unna's polychrome blue in the melangeur permits a simultaneous differential count.

6. A differential count is important in differentiating the paretic fluid from others, especially where the cytosis is due to small number of polynuclears.

7. The conditions under which syphilis produces a spinal leucocytosis demand further investigation, especially regarding the number and character of the cells. The increase of cells in the paretic fluid is apparently independent of any long antecedent syphilis.

8. There seems to be a correlation, both qualitative and quantitative, between the spinal and hæmic leucocytosis, which particularly refers to the mononuclears, but includes the polymorphonuclears, especially after convulsions.

To detect the mentally defective immigrants, a systematic plan of inspection has been devised. Qualified medical officers search for immigrants who seem atypical or who even remotely suggest mental disease. The immigration inspectors have been provided with memoranda as to the peculiarities which might suggest the existence of insanity, and are requested to report such to the medical officers. Occasionally, immigrants who have shown marked evidences of insanity during the voyage, are reported by the ship's surgeons. Doubtful cases are retained for further observation; certified cases are to be kept in a psychopathic pavilion under trained attendants until they can be returned to the land from which they came.

Editorials.

THE BEDSIDE MANNER.

It appears to be generally accepted as a truism in connection with the practice of medicine that the success of the physician or surgeon depends largely on his "bedside manner." History tells us much that is interesting, but perhaps not always instructive, as to the "manners" of very successful men in our profession. One of those most frequently mentioned is the great Abernethy, who was sometimes brusque, sometimes rude to his patients. The stories as to his "rudeness" were probably greatly exaggerated, since he had really a kindly heart, but had a tremendous hatred for chat and humbug. We may say to the young physician commencing practice, don't cultivate either abruptness or "rudeness," notwithstanding anything you may have heard about Abernethy.

The *British Medical Journal*, in a recent article, repeats an old story we have often heard. Sir Richard Quinn used to tell that when he was a young practitioner he was called in by an older physician to help in a case which caused anxiety. Before going in to see the patient he endeavored to assume a proper degree of solemnity, but while doing so his senior said, "For God's sake, man, try to look more cheerful, or they will take you for the undertaker." While the funereal manner is not advisable, the other extreme of forced joviality is still more objectionable. The patient is apt to consider his condition serious, and will strongly resent any joking at his expense. Apart from any such consideration the hysterical jokes of the surgeon or physician in serious cases are apt to be very dismal.

In the article referred to we are told that one of the essentials to a good bedside manner is cheeriness. The writer of this article well remembers a somewhat serious illness from typhoid fever in his boyhood days. He was attended by the late Dr. Dixie, of Springfield, a large man with a heart and soul as big as his body. His patient soon learned to love him. The doctor brought with him into the sick-room a cheery kindliness which seemed to permeate the atmosphere, and remain a long time after

his departure. For more than forty years the patient has remembered those visits, and now they are as vivid in his mind as ever. Oh, for a manner like that! So he thinks now. But Dixie couldn't help it. He continuously carried within his person a ton of human kindness of which a teaspoonful would fill the largest room.

Shortly after the writer commenced practice he received some sage advice as to his bedside manner, and reported the same to a senior physician. The latter spoke as follows: "Cut all that out. Be yourself, man; never mind any d——d mannerisms." Sir William Jenner used to express the opinion that if the doctor made the patient believe that he was thoroughly in earnest about his case it mattered little what his manner was.

While we fully appreciate the very great value of earnestness, cheeriness, and kindness, we consider it supremely important that the doctor should have a thorough knowledge of the diseases and serious emergencies which he is apt to meet, and a definite idea in his mind as to the proper treatment of the same. If he carefully and conscientiously studies each case coming under his observation, and if he cultivates a kindly tact in connection with his patients, he need worry but little about what is called "bedside manner."

ONTARIO MEDICAL ASSOCIATION.

The Vice-Presidents of the Ontario Medical Association with the Chairmen of the Committees on Papers and Business, and on Arrangements, Drs. R. R. Wallace and A. B. Osborne, met at the home of the President, Dr. Olmsted, in Hamilton, Dec. 15th last, to inaugurate the work for the year.

Dr. Olmsted reported a personal canvass of several portions of the Province to stimulate an interest in the coming meeting, which will be held in Hamilton, May 26th, 27th and 28th next.

The two local committees have already done much work making arrangements for the meeting. It is earnestly hoped that the members of the Association in all parts of the Province will support these committees very heartily.

The Committee on Papers are able to announce that Dr. Charles G. Stockton, of Buffalo, will deliver the address in Medicine, and Dr. Charles L. Scudder, of Boston, will deliver that in Surgery.

The Association desired at its last meeting to stimulate a wider interest among the practitioners of the Province in its work, and with this laudable object in view decided to have the meeting of 1908 outside of Toronto, where it has been held for so many years. Whether such decision was wise or otherwise brings up a question which has been much discussed in the past, and needs no special consideration now. The profession of Toronto almost unanimously approved of Hamilton as the place for the next meeting. Under such circumstances the physicians of the former city should give the coming meeting their most loyal support. We think we can promise that Toronto in proportion to its population will make the best showing as to numbers at the Hamilton meeting.

And now to the profession of Ontario outside Toronto, let us say that this is a sort of a challenge. To use a little of the rather expressive vernacular of the street, "it is up to you" to show that our prediction is incorrect.

MARRIAGES IN ONTARIO.

In the interesting Report upon Births, Marriages and Deaths for the year 1905, we find some interesting statistics and statements as to marriages in the Province of Ontario.

The marriage rate of 9.2 per thousand is 0.3 per thousand in excess of the previous year.

In considering the statistics in respect to marriages the continued increase in the returns from the County of Essex is deserving of more than mere passing attention.

As compared with the general returns from the province, it will be seen that of the total increase over the year 1904, six hundred and thirty-seven (637), nearly one-half, or 316 were registered in Essex alone, which is 93 in excess of the return for the County of York, which includes the City of Toronto, for the same period.

It will further be observed that while the provincial marriage rate per thousand of the population is 9.2, that for Essex County is 32.2. This large proportion is due to the fact that a large number of people from the United States (mostly divorced) come over to Sandwich and Windsor to be married.

In Sandwich, of 318 marriages, 297 were performed by the same clergyman, six others dividing up the remaining 21 marriages. Of the witnesses, in the case of the two hundred and ninety-seven marriages, three members of the clergyman's family witnessed as follows:—One 163 times, a second 111 times, and the third, 75.

In Windsor the division of labor was greater, some 29 clergymen registering the total number of 1,193 weddings performed during the year,—one clergyman marrying 365 couples, another 225, three others registering 174, 137 and 106 each, the next in order having officiated at only 54 weddings. In the instance of the 365, a family compact in respect to witnesses apparently existed, the six members appearing as witnesses on 197, 89, 50, 10, 3 and 2 occasions respectively.

The contrast offered by the County of Essex in respect to marriages when compared to the province is still further emphasized when it is seen, while the average rate for cities is 14.4, Windsor, which is the chief municipality in that county, shows a rate of no less than 91.5 per thousand.

Another practice which is becoming more common, and one to which issuers of marriage licenses should not lend themselves, is the providing of a room upon the premises of the issuer in which the marriage ceremony can be performed; and while there is no statutory provision prohibiting such an accommodation being made by the issuer, yet the very semblance of trafficking in what in this province is looked upon as both a civil and religious right should at all times be avoided.

The Registrar is of the opinion the law relating to the Solemnization of Marriage should be amended, requiring, in the case of both contracting parties being non-residents of the Province of Ontario, that one of the parties should have resided within the county for at least fifteen days, and this should be certified to by an affidavit from the householder in which said party was

so domiciled, and on no account should a license be issued without the production of such an affidavit, said affidavit being forwarded to the Registrar-General. And the performance of the marriage ceremony at the office of the issuer should be absolutely prohibited. In this manner the system of hasty marriages, to call it by a simple name, would be materially improved. Certainly at present it is a blot on the good name of the province and a stigma to those trafficking therein.

INFLUENZA IN 1908.

The type of influenza and grippe which has appeared during this season, though not so universally prevalent as on the first appearance of this serious and troublesome malady, is yet certainly serious and prevalent enough. The most striking feature of the prevailing type seems so far to be a marked tendency to affect the heart at an early stage of the attack. On the second or third day we have seen several patients recently, in whom the radial pulse was almost imperceptible and in whom the prostration was marked and seemed to take the form of cardiac weakness almost from the first. Two fatal cases have also been reported, both from cardiac failure. In neither of these cases were any heart depressants used to reduce the temperature or for any other purpose.

Again has the wisdom of at once placing the patient at rest in bed as the most important part of the treatment been amply justified.

TORONTO WATER.

Christmas comes but once a year, and but once a year will the dear public listen to anything about city affairs. That brief season begins about December 10th to 15th, and ends when Big Ben strikes twelve on New Year's morn. Sometimes it is omitted for a year or two, but not so in 1907. The dear public really did wake up and listen for once when Dr. Sheard said, "We are going to have this filtered water." Then most of the other

people who did not happen to be awake when their comrades heard Dr. Sheard, said: "What are these Doctors making such a fuss about the water now for—we have got the best water in the world?"

There are many good answers to the above intelligent question. One only will suffice—the record of the number of times Dr. Amyot found sewage—colon bacilli—in the city water in November and December, in 1904, 1905, 1906, 1907.

Here is the record:

1904—Nov.—No infection found.
Dec.—No infection found.
1905—Nov.—Infection found Nov. 1, 7, 17, 20.
Dec.—Infection found on Dec. 1, 2, 11, 18, 26, 30.
1906—Nov.—Infection found Nov. 16, 19, 27, 30.
Dec.—Infection found Dec. 6, 7, 8.
1907.—Nov.—Infection found Nov. 9, 15, 22, 23, 24, 27.
Dec.—Infection found Dec. 3, 16, 18, 28, 30.

That is what we doctors are making a fuss about. We don't like diluted sewage for drinking water. It is not good enough.

BRITISH MEDICAL ASSOCIATION.

The next annual meeting of the British Medical Association will be held (as previously announced) in Sheffield, July 28th to 31st, inclusive. Dr. Henry Davy, of Exeter, the President, will open the meeting, but Mr. Simeon Snell, the President-elect, of Sheffield, will conduct it.

It is expected that the address in Medicine will be delivered by Dr. Jas. Fowler, Middlesex Hospital, London; the address in Surgery, by Mr. Rutherford Pye-Smith, Sheffield; the Popular Lecture, by Mr. Edmund Owen, St. Mary's Hospital, London.

The Presidents of Sections will be: Anatomy, Dr. Christopher Addison, St. Bartholomew's Hospital, London; Pathology, Mr. Charles J. Martin, Lister Institute of Preventive Medicine, London; Physiology, Dr. E. H. Starling, London; Medicine, Dr. Wm. Dyson, Sheffield; Diseases of Children, Dr. C. H. Willey, Sheffield; Psychological Medicine, Dr. W. S. Kay, Sheffield; Indus-

trial Diseases, Dr. Thos. Oliver, Newcastle-on-Tyne; Electrical, Dr. E. Reginald Morton, London; Tropical Diseases, Colonel Sir R. Havelock; Surgery, Mr. Sinclair White, Sheffield; Ophthalmology, Sir Henry R. Swanzy, Dublin; Laryngology, Otology and Rhinology, Mr. George Wilkinson, Sheffield.

GENERAL HOSPITAL STAFF.

The Board of Trustees of Toronto General Hospital have issued the final report of the Committee on Staff Reorganization. The committee recommended that in addition to the head of each department, there shall be a senior assistant, or assistants, and that the following gentlemen be appointed to the positions specified :

Surgery—Service in charge of Dr. George A. Bingham. Senior assistant, Dr. Charles Shuttleworth; clinical assistants, Drs. Wallace Scott and Arthur B. Wright. Service in charge of Dr. Alex. Primrose. Senior assistant, Dr. F. N. G. Starr ; clinical assistants, Drs. Stanley Ryerson and Samuel Westman. It is recommended that Dr. Clarence L. Starr be given the standing of senior assistant and attached to Dr. Primrose's service for the purpose of being available as an assistant for Mr. I. H. Cameron, the senior professor in surgery in the University of Toronto. Service in charge of Dr. Herbert A. Bruce. Senior assistant, Dr. John Malloch; clinical assistants, Drs. Warner Jones, John McCollum and A. A. Beatty.

Medicine — Service in charge of Dr. Alex. McPhedran. Senior assistant, Dr. A. R. Gordon; clinical assistant, Dr. Wm. Goldie; in charge of tuberculosis clinic, under Dr. McPhedran's service, Dr. Harold C. Parsons. Service in charge of Dr. W. P. Caven. First senior assistant, Dr. John Fotheringham ; second senior assistant, Dr. W. B. Thistle; clinical assistants, Drs. E. C. Burson and Joseph S. Graham. In charge of the department for the treatment of functional neuroses under Dr. Caven's service, Dr. D. Campbell Meyers. Service in charge of Dr. Graham Chambers. Senior assistant, Dr. R. D. Rudolf; clinical assistants, Drs. Goldwin Howland and Geo. W. Ross; clinical assistant in dermatology, Dr. D. King Smith.

Gynecology—Service in charge of Dr. James F. W. Ross. Senior assistant, Dr. Frederick Marlow; clinical assistants, Drs. W. B. Hendry, A. C. Hendrick, Ida E. Lynd and Helen MacMurchy.

Obstetrics—Service in charge of Dr. Kennedy McIlwraith. Senior assistant, Dr. Frederick Fenton; clinical assistant, Dr. J. A. Kinnear.

Eye department—Service in charge of Dr. A. R. Reeve. Senior assistants (of equal rank), Drs. Charles Trow, J. M. MacCallum and D. N. Maclennan; clinical assistants, Drs. Colin Campbell and W. H. Lowry.

Ear, Nose and Throat department—Service in charge of Dr. Geo. McDonagh. Senior assistants (of equal rank), Drs. D. Gibb Wishart, Geo. Boyd and Perry Goldsmith; clinical assistants, Drs. C. M. Stewart and Gilbert Royce.

Department of Anesthetics—Dr. Samuel Johnson in charge. Assistant, Dr. Duncan Anderson.

Electrical Department—Dr. Charles R. Dickson in charge. Assistant, Dr. George Balmer.

The committee recommended that all appointments lower than that of senior assistant should be probationary, and subject to special review before the annual appointments are made; also that in observance of the provisions of the Burnside Trust agreement, Drs. J. A. Temple and F. LeM. Grasett be appointed life members of the active staff without service.

The committee recommended that the following be added to the consulting staff:

Medicine—Drs. John L. Davison, T. F. McMahon, W. H. B. Aikins, Allen Baines and John Caven.

Surgery—Drs. Luke Teskey, R. B. Nevitt and N. A. Powell.

Obstetrics—Dr. Adam H. Wright.

Eye and Ear department—Drs. G. Sterling Ryerson and G. H. Burnham.

In presenting the final report, which was adopted, the committee recorded its appreciation of the excellent character of the service rendered by the staff, past and present, and expressed its grateful acknowledgment of the self-sacrificing efforts in the interests of the sick, and of medical education, on the part of members retiring, several of whom had been connected with the hospital for long periods, and had requested to be relieved from further duty. It was recommended that the committee be continued in existence for the purpose of assisting in bringing into effect the regulations adopted by the board in connection with the establishment of the new services.

NOTES.

The Academy of Medicine, Toronto.

At the inaugural meeting of the Academy of Medicine of Toronto, on December 3, oil portraits of R. A. Reeve, B.A., M.D., LL.D., Dean of the Faculty of Medicine, and of R. B. Nevitt, B.A., M.D., were presented, first to themselves, and then by them to the Academy. The portrait of Dr. Reeve was presented by Professor I. H. Cameron on behalf of the Executive of the local branch of the British Medical Association; and that of Dr. Nevitt by Dr. J. T. Duncan on behalf of the faculty and graduates of the Ontario Medical College for Women, of which Dr. Nevitt was Dean when it was in existence.

Training in Medical Organization.

The students of the University of Pennsylvania Medical School have formed an organization, the purpose of which is to acquaint the undergraduates with the workings of the American Medical Association, after which it is very closely modeled. The various student societies take the place of the State organizations and elect members to a House of Delegates, which transacts all the business of the association. An annual meeting is held, at which papers are read by chosen members, thus encouraging original research and a scientific spirit. The organization is named The Undergraduate Medical Association of the University of Pennsylvania, and already has over two hundred and fifty members.

Queen's New Medical Buildings.

The new medical laboratories building of Queen's College, Kingston, was formally opened January 14th. Among the visitors were Hon. Dr. Pyne and Dr. R. A. Reeve, of Toronto; Drs. Mills, McCallum and Adami of Montreal, and Dr. Lewellys F. Barker, of Johns Hopkins Hospital, Baltimore.

In the new building accommodation is provided for biology, physiology, histology, pathology, and bacteriology. There will also be room for public health work and dairy work. Very good work has been done in dairy bacteriology in the Queen's laboratories for something like 15 years. Pure cultures are now being supplied to all the chief factories throughout Eastern Ontario from these laboratories, and problems connected with this industry are constantly being studied.

Queen's University is a grand old institution, We rejoice greatly in her prosperity, and we congratulate the Medical Faculty on this important addition to her equipments. Dr. Pyne in his brief address said that he had never seen $50,000 of Government money more economically expended. He also added that Queen's would continue to have the sympathetic support of the Government.

Personals.

Dr. N. J. Heatlie has removed to Pontypool.

Dr. W. H. Pepler visited Preston Springs last month.

Dr. R. D. Orok is doing post-graduate work in Edinburgh.

Dr. F. C. Trebilcock is doing post-graduate work on the Continent.

Dr. G. H. Burnham, of Toronto, now has his office at 2 Bloor St. East.

Dr. N. J. Tait has removed from Ingersoll to 498 Spadina Avenue, Toronto.

Dr. E. R. Langrill, of 17 Spruce Street, Toronto, has removed to Virden, Man.

Dr. T. F. McMahon, of Toronto, paid a visit to The Welland, St. Catharines, last month.

Dr. McIntyre, of Winnipeg, on account of ill health has removed to Summerhill, B.C.

Dr. W. B. Hendry, of Toronto, has been elected President of the Canadian Football Union.

Drs. W. A. Young and J. H. Lowe left Toronto to visit the West India Islands, January 15th.

Dr. John Duncan has returned to Toronto after a year's post-graduate work in London and Dublin.

Dr. James McCullough, of Spadina Ave., Toronto, has returned from a visit to New York and Cuba.

Dr. Gibb has returned to Victoria, B.C., after a visit of six months to Great Britain and the Continent.

Dr. Jas. M. Forster has been transferred from the Mimico Asylum for Insane to the London Asylum.

Dr. C. H. Britton, of East York, quite recovered from an attack of pleuro-pneumonia early in January.

Dr. Williams, of Vernon, B.C., has gone to England, and expects later to visit Kimberley, South Africa.

Dr. L. F. Barker, after attending the Queen's function in Kingston, Jan. 4th, paid a short visit to Toronto.

Dr. W. C. Herriman has been transferred from the Rockwood Asylum, Kingston, to the Mimico Asylum, to succeed Dr. Forster.

Dr. Knight, who has been practising at Ninga, has bought Dr. McIntyre's practice, and removed to Winnipeg about the middle of December.

Dr. H. A. Abraham, who has been in charge of the Winnipeg River Hospital, in connection with transcontinental railway construction for the past 18 months, has returned to Toronto.

Dr. J. G. McKay, a graduate of McGill, who practised for a time at Revelstoke, B.C., has been appointed Assistant Superintendent of the New Westminster Asylum, in the place of Dr. Claire, resigned.

At the inaugural meeting of the Board of Education of Toronto, held January 9th, Dr. W. W. Ogden was elected Chairman of the Board, and Dr. John Hunter, Chairman of the Committee of the Whole.

We made a mistake in our last issue in announcing that Dr. A. Lindsay Webb had disposed of his practice in Wooler and had left the village. It appears that negotiations with such an end in view were carried on for a time, but fell through, and Dr. Webb will remain in Wooler.

In our last issue we stated that Dr. James Attridge, formerly of Highgate, Ont., and for several years a practitioner of Detroit, was fatally shot, Dec. 4th. We were wrong as to the fatality, as Dr. Attridge, although seriously injured by a "shot through the brain," made a fairly good recovery, and was able to leave the Harper Hospital of Detroit, Jan. 7th.

Dr. Angus McKay, of Ingersoll, who was nominated as Liberal candidate for the Ontario Legislature in South Oxford, has withdrawn for business reasons. It will be remembered that Dr. McKay was for many years one of the ablest men in the Ontario Legislature. He rendered signal service to the Ontario Medical Council on several critical occasions. His unexpected defeat at the last general elections meant a distinct loss to the medical profession of Ontario.

Marriages.

Dr. Albert Crux, of 103 Hazelton Ave., to Miss Laura A. Wraggle, B.A., Oct. 30th, 1907.

Dr. W. M. Meldrum, of New Durham, to Miss R. R. Maclean, Sept. 25th, 1907.

Dr. A. W. Hicks, of Halbrite, Sask., to Miss Eva Arnold, Oct. 3rd, 1907.

Dr. W. R. Ratcliffe, of St. Catharines, to Miss J. C. McCalla, Dec. 13th, 1907.

Mrs. Lesslie Sweetnam, of Toronto, was married to Dr. C. R. Stewart, of London, England, December 25th, 1907.

Obituary.

PHILIP J. N. STRATHY, M.D.

Dr. Philip Strathy, of 467 Spadina Avenue, Toronto, died suddenly at his home, January 2nd, 1908, aged 45. He received his medical education in Trinity Medical College, and after graduating in 1883 he went to Edinburgh and Vienna for post-graduate work. After his return he soon commenced practice in Toronto, and early became one of the best known physicians in this city.

NICHOLAS SENN, M.D.

Dr. Senn, of Chicago, was one of the world's greatest surgeons. The report of his death on the 2nd January came as a great surprise to his many friends. He was ill for some weeks from a cardiac affection, supposed to have been aggravated by his recent mountain experiences in South America. He was 63 years of age. He was born in Switzerland, but came to the United States when quite young. After graduating he practised for 20 years in Milwaukee and then removed to Chicago, where he became Professor of Surgery in Rush Medical College. His great work as a surgeon and as an author was very highly appreciated on both continents.

GEORGE FREDERICK SHRADY, M.D.

Dr. G. F. Shrady, of New York, died November 29th, 1907, aged 71. His death, after an illness of two weeks, was due to pyemia, resulting from cholelithiasis. He was appointed first editor of the *New York Medical Record* on its establishment in 1866, and continued its editor for 38 years.

Dr. J. A. Howitt, of Morristown, died Nov. 25th, 1907.

Dr. M. J. C. Naftel, of 961 Dundas Street, Toronto, formerly of Goderich, died Dec. 13th, 1907.

Mr. William H. S. Wood, senior member of the great firm of publishers which established the *New York Medical Record* in 1866, died December 11th, just twelve days after the death of Dr. Shrady.

We have to announce with deep regret that Mr. John Grafton Herald, a student in Medicine of Queen's University, Kingston, and a son of Professor Herald of the same University, died suddenly in Winnipeg, December 9th, 1907.

Edinburgh's two leading surgeons died on almost the same day. Professor Thomas Annandale, Regius Professor of Surgery in the University of Edinburgh, died suddenly of heart disease, December 20th, aged 70. He operated in the Royal Infirmary on the afternoon of the day of his death. Sir Patrick Heron Watson died December 21st, also from heart disease, aged 75.

Correspondence.

THE HOSPITALS.

To the Editor of The Canadian Practitioner and Review.

Dear Sir:—The City Hospitals have issued their fiat that from and after the 1st January the rate to patients sent in by the City shall be seventy cents a day, or $4.90 per week. From this the deduction may, we think, properly be drawn that henceforth these institutions are to be operated largely, if not solely, from a pecuniary standpoint, and not as should be the case from the standpoint of the greatest amount of good to the greatest possible number and at the lowest possible cost. Perhaps this is the more palpable in the case of the General Hospital for the reason that it comes more prominently under the searchlight. It has comparatively recently reorganized its ward arrangements, and wards which were public have been created semi-public where an advance can be levied. A large percentage of the public ward patients must now be content with the attic or garret, which has been assigned for their occupancy. The attic of the main building has now more than 60 beds. It was originally fitted up for infectious cases before the establishment of the Isolation Hospital, and was never intended for City Order patients.

The Government Inspector has condemned the garret wards, and it is difficult to understand why the Medical Health Officer, in view of this condemnation, should continue to allow City Order patients to be sent to quarters so unsuitable. Why does not he insist upon the semi-public and semi-private wards being allotted to City Order patients, in order that they may have proper accommodation during illness?

Evidently the precepts taught by the Good Samaritan are no longer to be considered or practised here. The whole thing has a distinctly business flavor as if its moving spirits were familiar with 100 per cent. dividends, and natural inclinations were actuated by monetary considerations.

Under the Charity Aid Act the Hospital receives from the Provincial Government a specific sum for each patient admitted, which in the aggregate amounted to nearly $13,000 last year, and this assistance is of course given with a view to lightening the burden of those whose ailments may cause them to seek the relief which such an institution is supposed to supply and afford, and to facilitate the work which it was primarily established to

perform, but it is not for the purpose of enabling the hospital authorities to fill its coffers or to put on unnecessary side.

Though the institution has a very capable man as its Superintendent, he is merely its nominal head, and would appear to have little or no voice in its administrative policy. May I not, therefore, ask the question, Whither are we drifting? We read the hand-writing on the wall, and it is perfectly clear that if the present sordid policy is continued, the rationality of the argument of many thoughtful citizens, that the time has come for the erection of a large civic or municipal hospital to be conducted on broad and philanthropic lines, is beyond question.

Yours truly,

Toronto, January 13th, 1908. "PRACTITIONER."

RECURRING CARCINOMA.

To the Editor of THE CANADIAN PRACTITIONER AND REVIEW:

Will you kindly insert the following in your journal, giving it as prominent a place as possible:

The writer desires information regarding any alleged recoveries or cures of inoperable or recurrent carcinoma of the mammary gland.

If any case or cases are known to anyone who reads this circular and can be authenticated by facts as to the history and condition prior to recovery and the length of time which has elapsed since recovery, such information will be much appreciated and duly acknowledged.

Any well-authenticated reports of recoveries from carcinoma, located in other parts than the mammary gland, will be welcomed.

Cancer paste cures, X-ray cures, radium cures, or cures as result of surgical operation are not wanted.

Hearsay cases are not wanted, unless accompanied by name and address of the person who can give knowledge first-hand.

Address, HORACE PACKARD,

470 Commonwealth Ave.,

Boston, Mass.

January 10th, 1908.

Book Reviews.

CLINICAL TREATISES ON THE SYMPTOMATOLOGY AND DIAGNOSIS OF DISORDERS OF RESPIRATION AND CIRCULATION. By Prof. Edmund Von Neusser, M.D., Professor of the Second Medical Clinic, Vienna. Authorized English Translation. By Andrew MacFarlane, M.D., Professor of Medical Jurisprudence and Physical Diagnosis, Albany Medical College. Part I., Dyspnea and Cyanosis. New York: E. B. Treat & Company. 1907.

The development of bacteriology since Koch's discovery of the tubercle bacillus in 1881, and the application of solid culture media for the differential growth of the bacteria have tended in the last two decades to lead the physician to rely for his diagnosis upon laboratory aids and less upon clinical observation. In order to be thoroughly understood and rationally treated, disease must be studied primarily in its entirety as a pathological process.

The all-absorbing search for the specific cause of a disease, although most valuable when indicated, has too often pushed into the background the manifest clinical evidences of the disease, and the physician has regarded them of subordinate value and apparently even of negligible worth.

The diagnosis of disease must, in the great majority of patients, be determined at the bedside and not in the laboratory. Laboratory findings are most valuable aids to diagnosis, but are not, except in a few instances, diagnoses themselves and never substitutes for clinical bedside work.

This present series of monographs accentuates the value of the study of symptoms as observed at the bedside of the patient, and reproduces the marvellous clinical pictures of Trousseau, Niemeyer, Sydenham, Flint and others, illuminated by present-day knowledge of pathology and clinical methods.

Professor Edmund Neusser, with his rare diagnostic instinct and his almost uncanny memory of clinical facts and their correlation to pathological findings, typifies in the strict sense the modern master clinician.

These lectures are the resultant of almost limitless clinical material and of a scientific acumen which does not overlook any fact no matter how seemingly trivial and unimportant.

Those who have had the opportunity of visiting Professor Neusser's clinic and of listening to his erudite exposition of diseases and have observed his methods in diagnosing cases before a largely attended class will read this work with an absorbing interest.

Dr. MacFarlane is to be congratulated upon the excellent translation of this, the first of a series of monographs on Respiration and Circulation. The others will shortly appear, one on Tachycardia and Bradycardia and another on Angina Pectoris.

Paraffin in Surgery. A critical and clinical study. By Wm. H. Luckett, M.D. Attending Surgeon, Harlem Hospital, Surgeon to the Mt. Sinai Hospital Dispensary of New York; and Frank I. Horne, M.D., formerly Assistant Surgeon, Mt. Sinai Hospital Dispensary. 12mo; 38 illustrations; 118 pages. Surgery Publishing Co., 92 William Street, New York City. Cloth, $2.00.

The authors have, in the above, undertaken to collate and analyze the literature relating to the subject of Paraffin injections, and to present the results of their personal observations.

The volume is small in size, printed on excellent paper and illustrated profusely, showing clinical results, and micro-photographs of tissues after injection.

The various chapters deserving special notice are those relating to the disposition of Paraffin in the tissues, its chemistry and accidents likely to be encountered.

In the second part is contained an analysis of sixty-four cases. Such various conditions as the treatment of herniæ, incontinence of urine and the operation in cases of saddle-nose having been treated, the volume will prove of the utmost use to any surgeon who undertakes the use of Paraffin.

Modern Methods of Diagnosis in Urinary Surgery. By Edward Deanesly, M.D., B.Sc. (Lond.), F.R.C.S., House Surgeon Wolverhampton and Staffordshire General Hospital. London, W. C. : H. K. Lewis, 136 Gower Street. 1907.

The above is a small volume of about 100 pages, written by a general surgeon, describing the more recent methods used in the localisation and diagnosis of urinary diseases. In the earlier chapters are discussed the interpretation of symptoms and abnormal condition of the urine.

The physical examination of patient and urinary organs next receives attention. Radiography, the cystoscope and its application are then fully dealt with, and finally the differential collection of specimens of urine by means of separators, etc., is taken up. The book is intended to be of aid to the general practitioner for reference in cases of difficult diagnosis, when the older methods prove insufficient.

Book Reviews.

CLINICAL TREATISES ON THE SYMPTOMATOLOGY AND DIAGNOSIS OF DISORDERS OF RESPIRATION AND CIRCULATION. By Prof. Edmund Von Neusser, M.D., Professor of the Second Medical Clinic, Vienna. Authorized English Translation. By Andrew MacFarlane, M.D., Professor of Medical Jurisprudence and Physical Diagnosis, Albany Medical College. Part I., Dyspnea and Cyanosis. New York: E. B. Treat & Company. 1907.

The development of bacteriology since Koch's discovery of the tubercle bacillus in 1881, and the application of solid culture media for the differential growth of the bacteria have tended in the last two decades to lead the physician to rely for his diagnosis upon laboratory aids and less upon clinical observation. In order to be thoroughly understood and rationally treated, disease must be studied primarily in its entirety as a pathological process.

The all-absorbing search for the specific cause of a disease, although most valuable when indicated, has too often pushed into the background the manifest clinical evidences of the disease, and the physician has regarded them of subordinate value and apparently even of negligible worth.

The diagnosis of disease must, in the great majority of patients, be determined at the bedside and not in the laboratory. Laboratory findings are most valuable aids to diagnosis, but are not, except in a few instances, diagnoses themselves and never substitutes for clinical bedside work.

This present series of monographs accentuates the value of the study of symptoms as observed at the bedside of the patient, and reproduces the marvellous clinical pictures of Trousseau, Niemeyer, Sydenham, Flint and others, illuminated by present-day knowledge of pathology and clinical methods.

Professor Edmund Neusser, with his rare diagnostic instinct and his almost uncanny memory of clinical facts and their correlation to pathological findings, typifies in the strict sense the modern master clinician.

These lectures are the resultant of almost limitless clinical material and of a scientific acumen which does not overlook any fact no matter how seemingly trivial and unimportant.

Those who have had the opportunity of visiting Professor Neusser's clinic and of listening to his erudite exposition of diseases and have observed his methods in diagnosing cases before a largely attended class will read this work with an absorbing interest.

tem ever published. The list of contributors is composed of some 21 of the most prominent neurologists in Germany and Vienna. The translators of this volume have conferred a favor upon the English-reading members of the profession by their excellent rendering of the text. The first two sections on the Macroscopic Anatomy and the Normal and Pathological Histology of the Central Nervous System form an excellent introduction to the work, and are especially valuable for clear, accurate and well ordered description. The section on General Neurological Diagnosis is most instructive, and is of special value to the student. Quinches' method of Lumbar Puncture is a very important and practical contribution; also the sections on Myelitis and Tabes Dorsalis are especially exhaustive and helpful Contrary to what we would expect from a work by German authors, the therapeutic side of the subject has been taken up in a most practical manner. The typography and plates of this work are all that can be desired, and are of great value to the reader. The book will prove of great service to the physician and student, and to the specialist in this branch of disease it is invaluable.

Modern Medicine: Its theory and practice in original contributions by American and Foreign authors, edited by Wm. Osler, M.D., assisted by Thos. McCrae, M.D. Vol. III. Infectious diseases (cont'd)—diseases of the respiratory tract. Illustrated. Philadelphia and New York: Lea Brothers & Co. 1907.

The favorable impression we formed of the first two volumes is increased by the third. Of the articles requiring special mention, those on Malta fever, by Col. Bruce; on tuberculosis, by W. G. MacCallum and L. Brown; on syphilis, by Wm. Osler and Churchman, and on hay fever, by Dunbar, will rank as classics, not only for the great mass of information they contain, but for the clearness and fluency of the style,—a very great consideration to the reader. This difference in readability is what characterizes a book written originally in English, as compared with one translated from a foreign language. Canada is again ably represented by Prof. A. McPhedran in a comprehensive article on diseases of the bronchi.

Selections.

The Application of Pure Ichthyol in Gonorrheic Epididymitis.

For the last two years Cæsar W. Philip, of Hamburg, has had good results with the following method in treating gonorrheic epididymitis:

During the acute stage the patient is kept in bed, the scrotum is raised, and cold applications are applied. In very mild cases, where the patient cannot stop working, a Langlebert suspensory with Priessnitz application are ordered from the very onset.

After four to seven days the acute symptoms, fever, swelling, and tenderness, abate. The gonorrheic inflammation rarely has a tendency to suppuration, but soon passes to the subacute and chronic stage. The chronic inflammation is characterized by the presence of much connective tissue. Clinically, there are frequent recurrences and often neuralgic pains. At rest, there may be no pain, but if the patient is up and about for a protracted period there may be another acute attack after weeks or months, so that the patient may be unable to work for a long time. The infiltration is often not completely absorbed, so that a circumscribed, dense nodule will remain in the epididymis.

Since this process closely resembles other chronic inflammations, particularly synovitis crepitans, pure ichthyol was tried in a large number of cases. The method of application was as follows: The diseased half of the scrotum, including the skin over the cord up to and beyond the inguinal ring, are painted liberally with pure ichthyol and then covered with a moderately thick, folded piece of cotton. The usual snugly fitting suspensory is then applied. Since the skin over the cord and that of the scrotum form a firm sheath, a dragging of the testicle with the diseased epididymis is impossible. It is sufficient to cut short the hairs over the scrotum; shaving is not necessary.

After four to five days the bandage is dissolved off with warm water and a new one applied.

In this affection ichthyol again demonstrated its properties as an antiphlogistic and absorbing agent to a marked degree. The infiltration disappears rapidly and the patients no longer complain of pain, even though they follow their vocation. The final result is very favorable. The infiltration remaining in the epididymis was very slight and sometimes absent altogether. The neuralgic pains in the testicle and epididymis disappear very promptly. The results were especially brilliant in the case of a patient who had three recurrences until ichthyol was used.

In conclusion it may be mentioned that only the ichthyol-ammonium of Cordes, Hermanni & Co. was employed. The

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Original Communications.

THE INEBRIATE POPULATION.*

By Dr. E. Ryan, Kingston.

What shall be done with the inebriate class of our population? is a question that is daily becoming one of anxiety and importance, to the physician, the economist, and the humanitarian.

The loss to society and the State of the productive activity of this large and ever-increasing class is enormously great. It might not be a difficult matter to arrive at a correct estimate, on this point, but this is not necessary for our present purpose. The question cannot be measured from an economic standpoint solely, nor should it be approached in a purely materialistic manner. It is so inseparably associated with all that makes life valuable, with human ideals and advancement, with the ethical well-being of humanity, that it cannot possibly be regarded in the light of economic science. The mental, moral, and physical development of mankind is entwined in these considerations. I might go further and say, that the continuation of the race itself, in its higher and more valuable attributes, is closely connected with this vital question. For, it must be admitted, that inebriety, in its many forms, is confined to no age, no nation, no race. Down through all the pages of history its course may be traced; at periods, like other endemic diseases, its virulence would seem to abate, only to break out all the more fiercely at another place, or another time.

Alcoholic inebriety stands possibly in the first rank, in the number of its victims. The more general use of alcohol has led,

* Read at meeting of Ontario Medical Association.

as might naturally be supposed, to a wide range of experimental research. Nicloux and Barbier, after patient and brilliant work, rich in pathological results, declare that alcohol, when administered to a woman in labor, will appear in a short time in the blood of the umbilical cord and in the placental circulation. From his study, Nicloux holds, that in the case of inebriates, sufficient alcohol would appear in the foetal circulation to set up a chronic intoxication, or congenital alcoholism. Children conceived in drunkenness and suckled by inebriates, fully develop the alcoholic cell, alcoholic tissues, and an alcoholic tendency. From such strong proofs he suggests the absolute necessity for legislation to prevent this form of racial degeneration.

In the *Prague Medical Journal,* Holitscher elaborates his studies on the action of alcohol. He declares it to be a protoplasmic poison that it reduces the vital activity of the cell, with special selection for the more highly organized tissues, the brain, nerve tissues, and blood vessels. Hardening of these highly-organized tissues follows, with physical and mental degeneration.

Drew states that of those committed to the State Asylum of Massachusetts, 93 per cent. were drinkers, or were the victims of alcoholic heredity.

These are the views of all who have given the subject any pathological or clinical study. The alcoholic cell lays the foundation, on the protoplasmic poison the cell is nourished, the tissues formed by these cells must naturally be aberrant in their functions, whether these be mental or physical in their character.

It would appear, as our modern life became more complex and varied, the nerve strain greater, other drugs and poisons began to play a more important part in the causation of inebriety. The nerve strain due to the struggle for existence, the mad race to meet the demands of modern sensuous and luxurious methods of living, lead to physical and mental instability. The soothing influence of drugs is earnestly canvassed, to stave off the inevitable collapse; physicians frequently recommend this temporary and artificial respite, and often indeed become themselves the victims of this fatal malady. Chloral, morphine, cocaine, chloroform, all have their votaries, and their victims—unfortunately a daily-increasing number. In their debasing mental effect, in their action on the ethical and moral life, the course of these drugs is steadily progressive. It is with the utmost difficulty, on many occasions, the disease is discovered, even the trusted family physician is frequently deceived. The most subtle and cunning methods are resorted to, that detection may be avoided, and when

at last the disease manifests itself, as it inevitably must, nothing is left but a mental and physical wreck. Little personal effort is made by these inebriates to secure escape. Through some unknown method, these poisons select the higher centres of life, the moral characteristic is the first to disappear, the mental follows; the physical life, the least valuable, offers the greatest resistance. The clinical characteristics vary greatly with the individual, his hereditary tendency, his social acquirements, and from many other causes. As a rule, however, the different phases of inebriety run along definite and well-defined lines. The incipient stages of the disease are, therefore, easily discernible, and are early manifest to the family and to the family physician. Of course, sooner or later the whole class of inebriates require medical assistance and supervision. The acute cases, and the periodic drug storms, are frequently, and often very successfully, managed by home treatment. The General Hospitals likewise offer accommodation and methods for the therapeutic management of this particular class.

There is, however, another picture quite familiar to every physician. There is the class in which the disease manifests itself early in life, and goes on progressively from day to day, and from year to year; there may be periods of intermission, there may be none. There is the successful business man, who, after a life of toil, with marked success, becomes a confirmed inebriate. He may, and possibly has been, a moderate alcoholic for years. There is the successful physician, the dentist, the man eminent in law, the woman of social distinction, upon whom inebriety, of some form, has fastened, and who are daily drifting farther away from escape and recovery.

Every medical man knows the line of treatment that should be followed, but, under existing circumstances, he is powerless to act. Home treatment in these cases has proved a failure, though followed with care, patience, and skill. The periodic trips to the General Hospitals have lost their value, indeed they have become a nuisance to all concerned. And this leads us to the "desirability of establishing an institute to which inebriates may be committed by legal process."

In a careful and rather extensive review of the literature on this subject there appears to be but one view, and that is, that success in the treatment of inebriates cannot be obtained without restraint. Kraepelin gives his views in the following words: "We must, therefore, try to induce all our alcoholic patients to abstain completely, if we would obtain permanent results; even then there will be many disappointments; still, it is possible in

half, or even two-thirds, of the cases, which are taken in time, to obtain the permanent recovery of drunkards. In all the more severe cases treatment in an asylum is indispensable, as, in ordinary life, the enfeebled will of a drunkard is exposed to many temptations, which he cannot resist by his own strength. Unfortunately, it is only now that a few asylums are being provided for drunkards, so that they can hardly be dealt with except in lunatic asylums, a circumstance which makes the prompt treatment, on which everything depends, very difficult. Too often the drunkard only comes under correct treatment when he has become a public danger, and so exhibits the most severe forms of alcoholism." On the other forms of inebriety his views are quite familiar.

Defendorf writes: "The successful treatment of chronic alcoholism demands complete abstinence from alcohol in every form. A few patients are capable of carrying out this injunction successfully by themselves, but the vast majority require the treatment afforded by a special institution for alcoholics. * * * The only successful treatment for morphinism is complete abstinence. For this purpose, the first requisite is isolation in a reputable institution. * * * An essential element in the successful treatment of cocaine inebriety is confinement in a reputable institution, where it can be determined, with certainty, that the patient does not have access to the drug."

Crothers, of Hartford, who has given many years of study to the treatment of inebriates, holds similar views. "The first thing in the treatment of inebriates must be to secure the control of the patient. His own volition must be subservient to that of the physician. He cannot reason or direct as to the plan of treatment. Failure always follows self-treatment.

Removal from home is most essential to secure this control. As in other neuroses, particularly insanity, hysteria, and forms of neurasthenia, only control by and contact with strangers are effectual. This helps to break up the morbid trend of reasoning and associations, which cannot be done at home with relatives.

Private and special asylums, if properly managed, have superior advantages, which cannot be obtained elsewhere. In such places the stimulating firmness of a stranger, if coming with tact, does much to rouse up a weakened will. The surroundings, with the central purpose of removing the morphine, will encourage personal effort on the part of the patient. This idea should be made dominant at the beginning."

Oppenheim's views are similar: "Withdrawal of the poison

—which is the principal procedure in the treatment—can be successfully carried out only by enforced hospital treatment."

It would be quite unnecessary to further multiply the views of eminent observers. All unite in the opinion that there is but one method to be adopted, and that is to secure control of the inebriate, to place him under restraint; in other words, treatment in a properly regulated institution.

He must be taken away from his old environments, from his associations, from his temptations. A new sphere of life must be opened to him. A scientific method of treatment, firmly, systematically, and continuously carried out, appeals to the patient, and secures his co-operation and his active sympathy. The mental effect on the patient, of such, is of the greatest help in his treatment and recovery.

Now, how are we situated in Ontario, on a question of such far-reaching importance? There is not in the Province a single State institution, where these manifold diseases may receive proper treatment. With folded arms we stand idly by while the disease is doing its deadly work. Children are begotten in inebriety, suckled by inebriates, raised in an alcoholic atmosphere, and then sent out to join the grand army of inebriates staggering on to its doom. I need not dwell on the character of its victims; there is no class exempt. When they become a nuisance to society, a danger to the public, the State may step in and send the victim to the asylum; even then it is remarkable how many recover, and are not again affected; which would go to show the necessity of early and timely treatment, in suitable institutions, maintained by the State, and where the inebriate, in the incipient stage of his disease, could be committed by legal process.

The character of the institution, its location, its equipment, its medical supervision, must be carefully considered. It is scarcely necessary to remark, the institution should be conducted under modern hospital methods. The location should, by all means, be cheerful and enticing, and with the best sanitary surroundings. The prospect should be attractive and varied. The grounds must be ample and secluded, as far as possible, for open-air exercise and occupation thereby are valuable factors and cannot be overlooked. The equipment for such an institution should consist of modern therapeutic agencies. The continuous baths are an absolute necessity. From personal observation at Rockwood Hospital, where these baths are now in operation, I can speak of their valuable therapeutic action. Turkish baths, the various forms of douche baths, etc., are necessary comple-

ments. Hot air cabinet, and proper electric apparatus, are valuable and useful aids to treatment.

The institution must be under medical supervision of the highest skill, tact, and experience. There is no class of disease so varied, presenting so many individual characteristics. Each case is a study in itself, and ought to receive special attention and direction.

Need it be added, that a staff of nurses, especially trained, is an elementary consideration.

What legal process should govern the institution? Manifestly, if the State assumes the responsibility, it carries with it the power of inspection, the privilege to admit and dismiss. Clearly, the person of the subject has the inalienable right of protection.

Proper legal forms of admission, for the various classes of inebriates, may be drawn up. When, in the judgment of two properly qualified physicians, attested on these forms, the individual can be classed as an inebriate, this should be deemed sufficient for his admission.

I am well aware this departure necessitates no small public outlay, but I am just as well aware, and every physician of experience will bear me out, that the expenditure will be amply repaid. Inebriety is amenable to treatment, and, if the disease be taken in its early stages, the results are most gratifying. It is worth something to save from final wreckage this large class of our population. It is worth something to secure their return to industrial and economic pursuits. It is worth something to protect the violation of homes, to prevent the commission of crime. Above all, is it the duty of the State to prevent the degeneracy of its population, the hereditary transmission of a vice, a disease that carries with it such endless shame and sorrow, that robs the nation of its brightest intellects, that sears and withers all within its lethal grasp.

GYNECOLOGICAL TREATMENT IN THE INSANE.

By Ernest A. Hall, Vancouver, B.C.

"The saddest chapter in the history of disease—Insanity—probably the greatest curse of civilized life."—Osler.

Herewith I submit a brief history of the cases of mental disease that have come under my observation during 1907. Some could be classed as borderland cases, yet all give definite indications of loss of mental control.

No. 136.—Mrs. H., aged 30. Heredity good, married seven years, never pregnant. As a child had been treated for tubercular peritonitis. After marriage she complained of severe pain over left ovary, with constipation and anemia. At times became melancholic, alternating with hysteria. As described by a friend she would sit and cry and mope, and then get cranky with everybody until there was no living with her. She gave a history of a period of severe pelvic pain followed by a bloody discharge from the rectum, after which she improved mentally for a short time. When I saw her, she complained of very little pain. The mental condition was sluggish and characterized by decided delusions, out of which she could not be reasoned, with a most irritable temper. She was incapable of managing her home, and required continual watching.

Pelvic examination. Small hard cervix and fluctuating mass in pelvis. Dilatation of cervix, curettage and removal of ovarian cyst gave a normal convalescence, both mental and physical. At the present time, after an interval of one year, she is enjoying excellent health and happy in her well-ordered home.

No. 137.—Mrs. A., aged 27. Referred by Dr. Henderson. One brother somewhat deficient mentally, two miscarriages, one living child four months old. A few weeks after delivery she developed typical puerperal mania.

Examination showed laceration of cervix with eversion of mucous membrane and subinvolution. Amputation of cervix, curettage, posterior vaginal section, removal of tubes and puncture of ovarian follicles was done under morphine-hyoscine anesthesia with a few drops of chloroform added.

Six weeks after her father wrote:—"She is not quite so noisy, much less troublesome, knows her baby and at times talks reasonably." Her physician reports her completely recovered several months since.

No. 138.—Mrs. F., aged 57. Good heredity, one miscarriage, no living children. Mental instability with erotomania was present for a brief period at age of 23. One year ago she had influenza,

followed by the same condition. At period of examination she complained of a feeling of impending dread, and manifested suicidal impulses.

Pelvic examination showed retroversion with adhesions.

Treatment recommended.

No. 139.—Mrs. H., aged 36. One brother slightly deranged. Has had three children, followed by several miscarriages. After the last miscarriage she had "fever," which, according to her husband, left her insane, necessitating her confinement to an asylum for three months, afterwards returning to her home, but unfit to properly manage it. Became suspicious of friends, abusive to the children and wholly unreliable.

Examination showed enlarged uterus and deep cervical tear. Amputation of cervix, removal of uterine fungosities, resection of the tubes resulted in but slight mental improvement. Patient has passed from observation.

No. 140.—Mrs. P., aged 49. Heredity good. Dementia of seven years' standing with periods of deep melancholia.

Examination showed right floating kidney and retroversion. Fixation of kidney and suspension of uterus done, no appreciable result until some three months afterwards when her husband wrote:—"Mrs. P. is recovering fast, both in body and mind, she is around and doing the most of her work. I feel so thankful that she is getting all right again."

No. 141.—Mrs. W., aged 65. Good heredity. Religious mania with melancholy lasting several months. Several years previously she had an ovarian cyst removed. She complained of pain in left inguinal region. Pelvic examination was negative. Upon opening the abdomen the omentum was found adherent to the abdominal wall, and the rectum adherent to the side of the uterus and to the stump of the tube. These adhesions were carefully freed.

Death followed from obstruction of the bowels. A post-mortem examination showed a knuckle of ilium had become adherent within the pelvis.

No. 142.—Mrs. D., aged 44. Referred to by Dr. Jeffs. Good heredity. No miscarriages. Youngest child 7 years old. Mild religious delusions for several years. For two weeks were so decided that removal to an asylum was contemplated.

Deep laceration of cervix, small cyst of left ovary, myometritis with fungosities. The appropriate treatment was given. Gradual return to mental health, after two months Dr. Jeffs reports her as recovered.

No. 143.—Mrs. W., aged 36, three children, youngest 10 years,

of excellent heredity and pleasant disposition. Since birth of last child her disposition has slowly changed, until she became irritable, subject to violent outbursts of temper, illtreats the children, and latterly has had periods of delusional insanity lasting several days.

Examination showed lacerated cervix, enlarged and retroverted uterus. Amputation of cervix, curettage, removal of tubes and overlapping of round ligaments. Convalescence normal, mental and physical.

No. 144.—Mrs. H., aged 32. Referred by Dr. King, who gave me the following history: "Had one brother who committed suicide. Since puberty she suffered with severe premenstrual pain. Married seven years ago, no living children, aborted four years ago and again three months ago, no specific history. Her husband sent her to me for examination, stating that she had been a great trial to him, that when he left the house he had to lock her in until his return. During the few days previous to menstruation she will make approaches to all the toughs around town, and even make a raid upon China-town." Dr. King found left pelvic disease and referred the case to me for treatment. I removed left pyosalpinx with dense adhesions and right hydrosalpinx, also dilated and curetted.

Too recent to report.

Comments.

The first matter of interest in the review of these cases is the gradual passing from irritability of temper and the milder stages of mental instability into deeper conditions of irresponsible action which was noticed in the majority of them. With the exception of puerperal cases this gradual development of mental conditions is the more frequent course of development of the insanities due to pelvic lesions. This is the stage which asylum superintendents have not the privilege of observing as the private practitioner has, and it is also the period *par excellence* of the most hopeful treatment, before vicious habits of thought and action have formed, and before secondary cortical degeneration has taken place.

The next point to consider is that all of these patients had well-marked pathological conditions of the pelvis, and with the exception of the one death from bowel strangulation, and one too recent to report, mental improvement followed treatment. This does not by any means prove that the mental conditions were a result of the pelvic disease, but it is at least suggestive that, with a predisposition towards mental instability, hereditary or

acquired, which we must in these cases always predicate, pelvic disease may be an important factor in the causation of the mental unbalance.

My practice is in the treatment of these cases to remove as far as possible hopelessly diseased structure, to correct displacements, repair lacerations, free adhesions especially of the clitoris, to remove no normal parts, except in cases where there is a decided hereditary history and in puerperal cases, in which I feel that I am justified, after consultation with the friends, in removing the tubes. Up to the present writing I have examined 149 women, all with mental trouble; 124 were married and 20 single. Of the married, 116 or 93 per cent., and of the single, 17 or 85 per cent., showed decided pelvic disease. Superficial lacerations of cervix or perineum, minor grades of version without adhesions I don't class as pathological, only such conditions as my honored teachers, Price, Kelly and Martin of Berlin, would consider sufficiently pathological to necessitate treatment in the ordinary course of gynecological practice.

In dealing with these cases we must remember the paradoxical statement of McGuigan of Kalamazoo Asylum, that mental cases require little mental treatment. The recovery is usually blocked to a serious extent by physical conditions only. He states that of the female inmates examined, less than 10 per cent. have normal pelvic organs. He lays down the rule that surgical relief is indicated when we have an abnormal condition present that causes any distress whatever, not especially during the period of mental disturbance, for sometimes it is not noticed then, but particularly in the period of normal mental action.

Horman, Physician to Pittsburg Insane Hospital, speaking of the proven work done along this line by Rohe, Manton and Price, says: "I feel that they have opened up a new field for the gynecologist and established the beginning of a new era for the alienist." He goes on further to state that we should be more concerned about our patients, especially of the neurotic type, who are suffering from uterine disease. Many times, if the uterine disturbances were relieved, the insanity would be removed. I cannot do better than to give a paragraph from one of his articles.

"No fact has been more clearly established by psychologic investigation and neurologic anatomy than that the human anatomy is wholly dominated by the sympathetic nervous system. The whole physical structure is subservient to its influence. It is a despotic force with compulsory requirements. There is no stasis, either active or passive, no modification of the activities,

no irritation, however slight, but will manifest itself through the sympathetic nervous system. I have seen, as already stated, in the treatment of insanities the result of uterine disease, the local or surgical treatment of the trouble not only cure the uterine disease, but effectually cure the concomitant disease occurring in the brain, thus showing the mysterious (?) and unaccountable (?) connection between them. A woman becomes the victim of nymphomania, amenorrhea, dysmenorrhea, or some one or more of the many forms of uterine disturbances; it may take on one of the amatory phenomena, especially of nymphomania, a religious turn, devotional enthusiasm of so violent a character as to necessitate removal to a lunatic asylum—and these are not fictitious cases—and all this because of local irritation. Finally, we may have a uterine trouble, an irritation, transmitted through the hypogastric, spermatic and other ganglia and plexuses, from cell to ganglion, passing onward to the sacral, to the cord, the medulla oblongata and the cerebellar and cerebral ganglia, finally by coronata radiate fibres to the cortex of the brain, that most valuable distribution of nervous matter, the seat of mentality and intellectuality, ending in a complete overthrow of the noblest propensity of woman, driving her to a madhouse, there to drag out her existence within the walls of her life prison. Thus, we have the beginning and end of a very sad picture."

DIFFICULT CASE OF LABOR IN SMELLIE'S TIME.

The following report of an interesting case of labor, taken from Smellie's Text-book of Midwifery, was presented to the fourth year students of the Medical Faculty of the University of Toronto, and clinical Class A was asked to consider it and send in a report on the same to Dr. A. H. Wright:

"Head expelled: os contracted round neck: delivery and death of mother.

"I was sent for to see a woman, aged 40, who had borne several children before in 1749. When I came I found the head expelled. I slipped up my fingers and found the os tinea contracted about the neck of the child (which was dead) and endeavored to pull it away, but in vain. I then sent for Dr. L., and I desired him to see what he could do, as my fingers were numbed. He first got one hand into the uterus, and then slipped up the fingers of the other, and brought away the child. The woman's pulse before delivery was strong, and she had little flooding; but we had not

been gone a quarter of an hour when we were sent for again. They told us that immediately after we went away, which was five minutes after delivery, she was seized with a shivering and a vomiting, and had fainted. We found her in a swoon, and held spirits to her nose; but she could not swallow, and died in about half an hour after delivery."—"Smellie's Midwifery," Vol II, page 272.

Criticize the treatment. What treatment would you suggest? What was the cause of death?

Answer not to contain more than three hundred words.

STUDENT'S REPORT.

Criticism of Treatment.

1. The doctor should have been there sooner. This error may be attributed to *nurse* or *doctor* or *both.*

2. The child being dead, and woman not suffering, time should have been taken to give an anesthetic before dilating the contracted os with such force.

3. After os was dilated, it wasn't necessary to introduce the hand into uterus.

4. Placenta was removed too soon after delivery of child, and should have been examined to see that membranes and placenta were all present. Uterus was not controlled.

5. Doctor should have remained an hour with patient instead of five minutes, after labor.

6. After returning, the treatment was not suitable for such a grave condition.

Treatment Suggested.

1. On arrival, give anesthetic, dilate the os, and then remove the child.

2. After waiting for 15, 20 or 25 minutes begin expressing the placenta very slowly.

3. Examine the placenta carefully, and if not all present introduce hand and remove the rest. Control uterus with hand.

4. Remain in house for one hour watching patient and treating any complication arising.

5. For serious symptoms give hypodermically, morphia, grs. 1-4, and repeat in ten or fifteen minutes if necessary.

6. Raise the foot of bed and have one doctor give saline by bowel, interstitially or intravenously, as deemed best. Then bandage extremities.

7. The other doctor should give anesthetic immediately and enter uterus to ascertain the cause and remove it if possible. Palpate abdomen to find condition of uterus.

8. After cause was removed, stimulants, as strychnia hypodermically, whiskey internally, should be given.

9. Remain with patient till danger is apparently over and treating as case demands.

Cause of Death.

1. Shock caused by concealed hemorrhage, owing probably to retained placenta, or contraction of lower segment.

2. Tetanic contractions of uterus causing rupture of lower segment, thus producing peritonitis and shock.

Remarks by Lecturer (Prof. Adam Wright).

This case was reported to Dr. Smellie by Mr. A. in 1749, who wished to know the cause of death. Smellie in his reply said: "I have been concerned in several cases, where, though the os internum was torn, the patient has recovered without vomiting or any other bad symptoms; and have known other women die, as it were instantaneously, after delivery, though I always imputed such sudden death to their being exhausted by long labor, the sudden emptying of their vessels, and a greater loss of blood than their constitution could bear."

In considering the answers of the students it should be understood that when this case was submitted they had gone through only a small portion of the course in pathological obstetrics.

Criticism of Treatment.

Although not specifically stated by Smellie, it is probable the patient had been under the care of either a doctor or midwife for some time before the arrival of Mr. A. P. We may agree that "the doctor should have been there sooner." "The child being dead" there was no necessity for undue haste. It is probably not correct to say "the woman was not suffering," because in most, if not all, cases of tetanic spasm of the uterus the patient suffers intensely. While the administration of an anesthetic would have been very desirable, this case occurred in 1749.

There appears to be some confusion of ideas as to treatment of the rigid os. In section 3 of "Criticism of Treatment" we find: "After os was dilated it wasn't necessary to introduce the hand into the uterus;" while in section 1 of "Treatment Suggested," we find: "On arrival, give anesthetic, dilate the os, and then remove the child." It may be stated in this connection that forcible dilatation of a rigid os, especially when there is tetanic

spasm of whole uterus, is the most dangerous procedure which can be adopted. Under such circumstances this form of accouchment forcé nearly, if not quite, always causes death.

The remarks as to the placenta, while in a sense correct, may be deleted, as there is no evidence that the treatment of the third step was any factor in the fatal issue.

It is quite correct to say: "The doctor should have remained an hour with the patient, instead of five minutes, after labor." The distinguished McClintock, of Dublin, the editor of "Smellie's Midwifery," thus comments: "The conduct of these gentlemen in one particular, not noticed by Smellie, was open to severe reprehension, viz., their leaving the patient 'about five minutes after delivery.' It has been for many years an invariable rule with me never to leave a patient within an hour after delivery, even when every step of the labor has proceeded most naturally, even I have often had cause to be thankful for so doing." Such conduct is all the more extraordinary when we consider the fact that the patient must have been in a very serious condition when they left.

The directions for the treatment of the shock and collapse may be accepted in a general way without going into details.

Cause of Death.—It is true that concealed accidental hemorrhage causes, in many cases, tetanic spasm of the uterus with extreme rigidity of the os producing great pain and profound shock. The students will find, however, before the end of the session that there are other more frequent causes of such shock of which a common one is prolonged labor. We believe the students are correct in thinking that there was tetanic contraction or spasm producing the shock; but we wish to add that the cause of death was probably rupture of the uterus, caused by the violent manipulations of the surgeons in the endeavors to stretch the os and deliver the child. There was probably not time for the development of peritonitis. Possibly the morphine and chloroform, at an earlier step, or even when Mr. A. arrived, might have relieved the spasm. If, however, such treatment failed, it is thought that some form of the so-called vaginal Cæsarian section would have been the proper procedure.

HEADACHE AND EYE-STRAIN.*

By Dr. Wm. Crawford, Hamilton, Ont.

In considering this subject I do not intend to go into the causes and treatment of all forms of headache, but only that which can be attributed to the eyes as a primary cause, and due largely or entirely to ocular anomalies, and propose to consider some phases of eye-strain where headache is not the only or the most prominent symptom. These two, headache and eye-strain, are so closely connected, the one the effect, the other the cause, that in any discussion of the one, the other will be necessarily considered.

First, as to the special form of headache caused by eye-strain: the most frequent form is that of brow-ache or supra-orbital headache, over one or both eyes, particularly marked after prolonged use of the eyes for close work.

Next, that of deep orbital, where the pain seems more deeply concentrated in the eyeball, and is more frequent where the defect is that of astigmatism, with the pain coming on after prolonged concentration of vision for either distance or near.

Then there is the fronto-occipital, which may be more manifest in the mornings, and following pretty constantly after a previous day's eye-strain, or an evening spent at concert, theatre, or cards. This form may precede a true migraine, and not disappear for a day or two. I wish to distinguish this form from a pure occipital headache, which is often found in connection with a neurasthenic condition.

Then temporal headache, which may follow eye-strain due to any form of eye defect, but is particularly frequent in cases of astigmatism with axes deviating from the vertical.

In distinguishing headache due to some ocular defect from that due to some other cause, the one great factor to consider is that in ocular defects the headache is produced or aggravated by use of the eyes, and is lessened or relieved by their rest. There are exceptions to this, but as a general working rule it will be found to be a practical guide. And the headache due to eye-strain may or may not be accompanied by asthenopia or painful vision. It is an error to suppose that if the vision is normal, or practically so, the headache is not due to eye-strain, as it is in the smaller ocular defects such as hyperopic astigmatism of one-half to three-quarters of a dioptre, or mixed astigmatism of a like amount, that give rise to the most troublesome headache, particularly if the axis be at an angle or against the rule, and in

* Read before the Hamilton Medical Society on April 3rd, 1907.

these cases the vision may be normal. In accommodative asthenopia also the vision for distance may be normal.

According to Hazen, "asthenopia is due to disordered innervation," caused by (1) errors of refraction, and (2) anomalies of the extra-ocular muscles, in about equal proportions.

It may also be due to reflex causes such as nasal obstruction, dental caries, other nose and throat affections, and also from the chest and abdomen, or to any general depression of the constitution.

Hansel says: "The eyes are not exclusive factors in the production of headache, but no diagnosis is complete which ignores them."

The larger refractive defects which are too great to be overcome by any degree of strain, result in suppression of the visual image in the most defective eye, or in squint, if there is considerable difference of defect between the two eyes, but if both eyes are about equally defective the result will be much reduced vision, and probably no headache, but this condition of lowered acuity of vision may, and likely will, have a large share in determining what the life of that person will be, if uncorrected, resulting in subnormal capacity and stunting endeavor; but if corrected early in life will produce a larger and brighter outlook and a development that may result in a distinguished career.

Then, eye defects may be unsuspected, especially in children, and if small in amount may give rise to no symptoms until close application at school, or later at business, may produce headache and asthenopia. Many people who have congenital eye defect go to adult life, and even to old age, with vision much below normal, not knowing anything amiss because they have no headache or pain that they think comes from the eyes, but when the defect is corrected vision is much better and life made more enjoyable. Many people also have poor general health; children are puny and sickly, and do not thrive well, until attention is drawn to the eyes by some soreness or other trouble, when the defective sight is detected, and corrected, when they are at once changed into happy, bright, and healthy people. Every oculist can testify to many such cases from his own experience, and I am no exception to the rule.

Many congenital cases of astigmatism have no headache or asthenopia until they reach adult age, when unusual close application or reduced general health will make manifest the eye-strain and cause headache or asthenopia.

Uncorrected errors of refraction, or muscular anomalies, are a prolific cause of diseased conditions in the eyeball itself. The

unequal strain caused by that condition on the growing eyeball will produce nutritional disturbances in the retina, choroid ciliary body, iris, and even the lens itself, which will retard and modify development and produce defects that no after-correction can remove.

Asthenopia, weak and sensitive eyes, recurring conjunctivitis, chronic conjunctivitis, sick headache, blepharitis, styes, strabismus, choroiditis, retinitis, chronic iritis and cyclitis may be and are often produced or made worse by uncorrected optical or muscular defects.

Again, there is the effects that uncorrected ocular anomalies may produce on the general health to be considered. I have referred to this before, but do so again to impress it on your mind. We all have had occasion to see the change that removal of a bunch of adenoids has had on the general health of a sickly child, and that change is not so great as the correction of an optical defect has on many a puny, sickly youngster.

How many adults have come to midlife with a pronounced ocular defect which has not been corrected, and have been stunted in growth both physical and mental, hindered in their career or utterly repressed, who with early correction might have been distinguished in life, we cannot say. We can see the improvement in like cases when the correction is made both in children and adults, but we cannot estimate what might have been in the others. We know what improvement takes place in many cases of chronic ill-health by the removal of an eye-strain that has been using up a great deal of nerve force, these being clearly reflex in causation, just as a polypus in the nose will cause recurrent attacks of asthma, which will cease to return when the polypus has been removed.

I might mention a few cases from the literature on the subject. Cases of epilepsy have been reported cured by Ranney, Stevens, Colburn and others, which had been treated by other means before without benefit, and which had ocular defects or muscular anomalies corrected, and had remained cured. This is not surprising when we consider that in many cases epilepsy is not a disease, but a symptom, and the cause remote. This is not hard to believe when we think of cases of epilepsy that have been reported cured by treatment directed to the stomach, or to other distant organs. Again, vertigo is a condition that is often produced by ocular defects, particularly muscular imbalance in the vertical plane, and is cured by their correction.

Cases of gastric disturbances are numerous, cited by Thompson, Gould, Parker, and others, which had been treated by other

means before, without result, but which have been relieved by correction of an ocular defect. These and other neuroses, being often reflex in causation, are the result of using up of nerve force by eye-strain in the patient trying to overcome some ocular defect, and diverting to the eyes nerve energy that should have been used in stimulating the different organs of the body to perform their own proper functions.

If an optical error can so influence the general bodily conditions that a chronic state of ill-health can be remedied by optical correction, and this cannot be denied, then it is not too much to say that the general weakness that was the predisposing cause of a fatal disease could have been arrested in many cases by attention to the eyes. Many times all that can be said was that the previous poor health was the predisposing cause, permitting the infection to find a lodgment. Then, might we not with truth go a little farther and say that the primary cause of the condition was eye-strain, which lowered the bodily resistance and nerve tone, and so permitted the infective germ to gain a foothold?

I would like to illustrate this and allied conditions by a brief report of a case or two from my case-book.

Case 1—Miss M. S., aged 25. Factory hand. First seen Sept. 12, 1906. History of ill-health, not strong, cannot stand much work, irritable, mother says very nervous, and has to be humored. No particular benefit has been derived from general medical treatment. About three weeks ago thought she got some foreign body in the eye (left), which made it irritable for a couple of weeks. Four days ago got a slight blow on the same eye, and since cannot see well out of it. Exam., Rt. P. M. and F. N.; L. P. N. Media very hazy, under homatropine found the vitreous very milky, with dark opacities floating about, principally in the lower outer field. Vision, fingers at 1 ft., Rt. V. equal 6/9, and with plus .75 D. Cyl. Ax. 90, V. equal 6/6. Gave Rt. correction, ordered rest of the eyes, gave a nerve tonic. Sept. 29, reported can see much better out of each eye, feeling happier, not so irritable, L. V. equal 6/44. Oct. 16, L. V. equal 6/24. Nov. 2, L. V. equal 6/20. Disk can now be seen. Nov. 12, L. V. equal 6/20, and with minus 1, V. equal 6/16. Left vitreous was cleared up enough to allow fundus to be seen, and showed hyperemia and choroidal changes. Improvement in general health and happiness continued, and she could do her work with much less trouble, and eyes do not now tire. The vitreous and choroidal changes could not be due to the foreign body, or the slight blow, which, no doubt, simply served to bring the condition of

the eye to her notice, and the pathological changes were the result of long-continued eye-strain interfering with the nutrition of the eye.

Case 2—Rev. T. J. H., Clergyman, in active work. Much headache, poor sight, very nervous, so much so that he often had the greatest difficulty in getting through his preaching service, and had often to lie down after, completely prostrated. After correcting a considerable amount of myopic astigmatism, he reported four months after that he had had no headaches for a long time, and was able to conduct his service and do his work with little trouble, and the nervousness was disappearing.

Case 3—Miss B. S., aged 30. Dressmaker. Had been troubled with much headache, and would be laid up for days at a time and utterly unable to work, with attacks that were typical migraine. After correction of .75 D. of hyperopic astigmatism, headaches have disappeared, patient is in better health than for years and gaining flesh. This patient had exophthalmic goitre, and was treated medically with indifferent success for some time before. Since the eye-strain has been removed the progress has been rapid, and is to all appearance cured, with slight protrusion of eyeballs left.

Case 4—A. M., male, aged 24. Poor sight all his life. No pain, no headaches, no inflammatory condition present. R. V. 6/20, with minus 3.5 S. V. equals 6/12. L. V. equals 6/36, with minus 4 is 6/12, with both V. 6/9. This case illustrates another condition where the refractive error was so great that no amount of strain could give good sight, and the attempt was abandoned, and there was no symptom but poor sight. These cases are only examples from my case-book, and could be duplicated by any oculist.

We as oculists have been taunted with the accusation that all eye patients coming to us have been found to need glasses, and the people who do not want to wear glasses stay away. I should just like to reply in few words to this effect, that patients do not consult us unless something is wrong with their eyes, and every oculist will tell you that, in comparison with the whole number of eye patients, the proportion who have some refractive error are in the large majority, in contradistinction to the number who have some diseased condition calling for medical or surgical treatment.

The number of patients who suffer from headaches is very great, and in ophthalmic practice it is a very prominent symptom. Anywhere from 50 per cent. to 80 per cent. of our patients suffer from headaches. Formerly every other method of treat-

ment was exhausted before the eyes were thought of as a cause, but so many patients have of late years been relieved of headaches by correction of some refractive error that patients do not now wait very long before consulting an oculist, or, in many cases, an optician.

Most eyes are a trifle ametropic, that is, have some refractive error, but in regard to the small errors it is only in cases where the eyes are overworked or the patient is in a subnormal condition of general health that it need be corrected.

Many persons from 20 to 30 years of age, with a small amount of refractive error, say, from one-half to one dioptre of hyperopia, will only need correction temporarily when they have a large amount of close work to do, or are in a reduced condition of general health, just as you would give a tonic to tide a patient over a period of general weakness.

Some years ago an interesting study was undertaken by Dr. S. D. Risley, assisted by a corps of competent associates, in examining the eyes of the school children of Philadelphia, when 2,422 eyes in 1,212 pupils were examined. Out of this number only 272 eyes were found to be emmetropic, or normal; 332 were myopic, and every one of these had lowered visual acuity; 1,792 were hyperopic, and 35 per cent. of these had painful vision; 1,330 suffered from astigmatism, and from 50 to 74 per cent. of these, according to the type of astigmatism—whether hyperopic astigmatism 50 per cent., myopic astigmatism 60 per cent., simple astigmatism, or mixed astigmatism, 74 per cent.—suffered from painful vision. Similar results were obtained in Europe, with particular reference as to the prevalence of myopia, and when it is remembered that all myopic eyes have lowered vision and are unhealthy, the significance is apparent. Dr. Risley says in reference to the European statistics: "It was shown that eyes with hyperopic refraction greatly outnumbered the emmetropic and myopic eyes, particularly during childhood, that the emmetropic eye was comparatively rare, but that the state of refraction most nearly approaching this ideal condition retained an almost uniform percentage throughout school life; that myopia, extremely rare or entirely absent before the beginning of the educational process, was found to advance steadily in percentage with the progress of the pupils in the schools, while the percentage of hyperopia diminished in about the same degree."

This points to the fact which is not properly respected yet, that the eyes of the young are in an unstable or changing condition, and that every child before starting to school should have the vision tested, and, if found abnormal, should have the refrac-

tion examined under a mydriatic, then, if found much abnormal, have the proper correction given. Many people who have only small defects of hypéropia or astigmatism, which has given them little or no trouble during the early years of life, will, when they have started in business which requires from them more continuous close work, complain greatly of the headache or painful sight, or mistiness of the print after a long or hard day's work.

Then, again, another class of patients who have had good and easy sight all their life, will begin to complain of eye ache after reading; at about 30 or 35 years of age, they are apt to consider that there is some other cause to lay it to than the eyes, when the fact is that they are early presbyopes, and the remedy lies in the use of a weak lens for close work.

Where the defect is great and cannot be overcome by any reasonable amount of endeavor, the patient gives up the effort and resigns himself to defective vision and its consequences, and is comparatively free from pain or headache, and if one eye is good and the other very defective, the poor eye gives up the unequal contest and deviates out of the line of light, and remains so, or suppresses the image formed on the retina, but if the defect is small enough to be overcome by effort it is tried, and the result is eye-strain, headache, and allied symptoms.

It is a fact which is daily observed that when the eye-strain results in reflex symptoms, such as headache, or nervous disorders, the eyes will be free from all local manifestations of disease, such as blepharitis, conjunctivitis, etc., and when the strain results in disease there will be no headache or pain.

I do not wish to leave the impression that because of the almost universal presence of some refractive error most people should wear glasses, nor do I wish to imply that glasses are the only treatment of the effects of eye-strain. I do not need to say to you that there are a large number of people who have a small amount of refractive error, who never suffer from any of the symptoms of eye-strain, and who are in good bodily health, but should they become reduced in health, they will then feel the eye-strain.

Anomalies of the external ocular muscles are also a fruitful cause of eye-strain, and when accompanied by a refractive error are often relieved by the correction of the refractive error alone, or if of larger amount must be treated by graduated exercise or by tenotomy of the offending muscle. Tenotomies and partial tenotomies have been much in vogue in the past, but have now been largely given up, even by those who were the strongest advocates in former days.

I would like to mention some of the limitations of opticians in

regard to the correction of optical and ocular anomalies. I will mention a couple of instances from my own experience. In one case a prominent optician supplied a patient with glasses, who came to me a few days after, and I found that he had well-advanced cataract, and the glasses were absolutely of no use to him. Another was given glasses and "Murine," and when he came to me shortly after had well-marked iritis, due to a constitutional taint. Then, again, no child should have a correction given unless under exceptional circumstances, or for a high-grade myopia, without full mydriasis. Then, again, a functional or subjective examination alone is often deceptive, and needs the controlling influence of the objective examination.

Then in diseased conditions of the retina or choroid, sometimes a convex lens might give some relief for a time and then the disease would be overlooked and would go on unchecked. Again, where an optical error was present and also a pathological condition, and the symptoms were only headache, then if the optical error were only corrected the headache might be relieved and the disease not suspected until much damage had been done. Oculists make mistakes as well as other people, but are less liable to than one who has no knowledge of the ocular apparatus, or only a very limited one. Family physicians should take pains to see that their child patients especially should be taken to an oculist and not to an optician.

In concluding, I would like to mention briefly that the practice of ophthalmology is taking a larger field in the practice of medicine as the years go by, so much so that Dr. H. F. Hansel, in a treatise on "Neuroses Occasioned by Eye-Strain," says: "Any theory of the origin of disordered function which does not embrace a consideration of the ocular apparatus is unscientific and open to criticism," and the same author says: "It is a noteworthy fact that in our strenuous American life the eyes suffer first and most in the general breakdown of the system."

The demands of modern business, the struggle for existence, make demands on no other organ of the body to so great an extent as on the organs of vision, and they in turn demand from the general system a large amount of nerve force.

In the evolution of mankind that is going on, the increased use of the eyes necessitated by changing conditions of life, calling on the eyes for more work than the past has done, demand more attention on the part of the profession and the parents to watch symptoms and to so assist the eyes of children to overcome adverse conditions that the eye may come out of the ordeal a much improved and more highly developed sense organ in the generations to come.

REPAIR OF SADDLE-NOSE BY REPLACEMENT OF BONES WITHOUT SKIN INCISION.

By D. J. Gibb Wishart.

The photographs "before and after taking" are those of Miss Gertie B., referred by Dr. Herbert Bruce, November, 1907, suffering from marked depression of ridge of the nose, amounting to serious deformity.

The history of this case is briefly as follows: At the age of eleven years, while running, she came into violent collision with a party running in the opposite direction and was knocked unconscious. The deformity has existed ever since. There is no history of syphilis and no impediment to breathing. The patient desires relief merely for cosmetic purposes.

On examination, the nasal processes of the superior maxilla

are found to be spread apart so as to allow the nasal bones to lie side by side and present unitedly a flat surface externally. In addition, the attachment of the upper lateral cartilages to the nasal bone in the middle line has been separated, and a new attachment formed at a lower point. Internally the conditions in both nares are practically normal. The condition therefore presented is a typical saddle-nose, combined with a flattening of the root of the nose, but otherwise a normal relative condition of the shape and position of the parts.

The line of procedure was as follows: As the patient was desirous of the best cosmetic effects, it was decided to make no external incision. Under general anesthetic, a narrow chisel used by Freer in septal resections was introduced through a small slit in the mucous membrane of the outer wall of the nose

on the right side, just over the lower bony margin of the anterior nares, where, through the skin, the suture between the nasal and maxillary bones was marked by a notch. With a hammer the chisel was driven along the suture to its upper end, the finger on the outside of the nose keeping control of its position. This procedure was repeated on the left side. A large pair of Adam's septal forceps was then placed one blade inside of the nose, and the other outside, the skin being protected by a pad of gauze, and the nasal bone of each side in succession seized and loosened from its attachment to the frontal bone and to its fellow.

The nasal bones being now freely movable and ready to be placed in a new position, a specially constructed saw was introduced on each side in succession through a small opening made in the mucous membrane of the outer wall of the nose directly opposite to the root of each maxillary nasal process, and, guided with the finger on the skin, the groove between the cheek and the nose was sawed from top to bottom. The incision with the saw was made just deep enough to allow of the production of a green-stick fracture of the nasal processes, the forceps named above being used in the same way as before.

It was now possible to tilt the maxillary nasal processes towards each other by the pressure of the finger, and this action at the same time produced the elevation of the suture between the nasal bones, and produced sufficient support to the nasal bones on either side to retain them at whatever angle was desired.

Several devices were tried to arrange a suitable external splint, but unsuccessfully, and it was necessary to have the nurse keep the parts in position by regular and frequent manual pressure upon the nasal processes during the first thirty-six hours after operation. This, though somewhat painful, proved quite sufficient for the purpose. The discoloration and swelling due to the bruising by the forceps were considerable, and yet not unduly marked, and speedily passed off.

This procedure secured the replacement of the bony framework, but a slight pitting was still present below the nasal bones in the centre line, and this was overcome by the injection of a small amount of paraffin. The result has been practically a perfect one, as will be seen by the appended photographs.

Selected Article.

TREATMENT OF ANGINA PECTORIS.

By Sir Clifford Allbutt, K.C.B., F.R.S., M.A., LL.D., D.Sc., F.R.C.P. (Lond.),

Regius Professor of Physics, Cambridge.

The remarks which I can make at present on this subject must be scanty. I am engaged upon a representation of the whole matter, to appear hereafter in association with chapters on arterio-sclerosis and other kinds of cardio-arterial disease.

Too often, nay almost universally, angina pectoris is regarded as inevitably fatal. On the contrary, of all perilous maladies it is, perhaps, the most curable. My list of permanent cures is a long one. But, as Sir William Broadbent once sharply retorted, "the *post-mortem* room is not the place to look for cures."

By angina pectoris I mean this disease and not something else, as by appendicitis I should mean this disease and not colic. To say that angina pectoris is not a disease but a "symptom-group" seems to me to be otiose; by a disease we can mean only a series of symptoms recurring with a reasonable degree of uniformity within certain limits, no other acceptation of the word is conceivable. Of course, all nosological classifications are arbitrary, and the names of "diseases" labels of mental concepts, not of things; the thing is the state of a certain person, a state in many particulars peculiar to himself; the disease or ideal concept is no "entity," but a blend of our impressions of many such-like persons—a phantom, or a "composite photograph."

That, in ninety-eight cases out of a hundred, angina pectoris consists in a painful lesion of the first part of the aorta is an inference of my own, long suspected, but first published at a meeting of the Eastern Counties Branch of the British Association at Yarmouth on June 23, 1894. I think, however, that sometimes it is produced by stretching of the pericardium, as in aneurysm of the left ventricle, or by inflammation of that part of the tunic which invests the root of the aorta; very rarely it may depend on some extraordinary kind of disturbance in the mitral area. The innervation of all these parts is approximately the same, and the disease, even in these rare points, scarcely deviates therefore from the common formula. In this article I shall neglect these exceptional cases and regard angina pectoris

as due to tension of a sore aorta. This tenderness may be due to aortitis of any kind, *e.g.*, rheumatic or influenzal aortitis, or atheroma. In the former case the tensile stresses may be about or even below normal, in the latter they may be normal or excessive.

Primarily angina pectoris is not a fatal disease; secondarily, by reflex inhibition of a frail heart, it frequently proves fatal. Even in the case of an infirm heart complete recovery often comes about. In young subjects recovery is the rule to which the exceptions are very few.

I have said that, as a series of symptoms, angina pectoris occurs with notable uniformity within limits, but these limits are wide. In this respect it may be compared with epilepsy, also uniform within limits still wider. Epilepsy varies about a mean, having as extremes *petit mal, grand mal,* and the *status epilepticus.* So in angina pectoris we note a *petit mal*—the so-called "stenocardia"—the great attacks, and the *status anginosus.* But yet these limits are of degree only. In angina pectoris there are not, or we have not recognized, such masked and eccentric varieties as pertain to epilepsy.

In treatment, then, we have to regard three purposes: First, to mitigate, if possible, the lesion of the aorta; secondly, to reduce the stresses; thirdly, to block the inhibitory influence on the heart. In many cases to reduce the stresses may be our only means of compassing the restoration or quiescence of the vessel; if so, the means are in their nature similar; and this is the usual condition.

To combat the local affection directly we may use antidotes, as in acute rheumatism for instance, salicylates, and perhaps the iodides. The iodides, with or without mercury, would be required in syphilis. In aortitis arising from other toxins, such as influenza, antidotal means may be lacking, and we have to trust in the recuperative methods of "Nature." There are, however, intermediate cases, such as gout, in which we may not have antidotes so direct as the salicylates, but tolerably efficacious empirical methods nevertheless, on which we may place no little reliance.

Indirectly we may do much, and for immediate alleviation great things, by reducing the tension, whether this be relatively or positively overbearing. In many, perhaps in most cases the tension depends on pressures exceeding the normal, perhaps very excessive. In elderly persons, to speak generally, angina pectoris is commonly attended with atheroma and often with morbidly enhanced arterial pressures; but I have seen not a few

cases, even in the elderly, in which the angina pectoris seemed to be of infective origin, especially of influenzal origin. In these the arterial pressures were not persistently enhanced, and they ended favorably, I think without exception. Recovery, however, is not invariable in influenzal angina, as there is a decisive number of necropsies on record.

It may be difficult to distinguish between means used simply to reduce pressures and similar means for the elimination of gout or goutinesses; but in practice the distinction is unimportant. The use of gentle and frequent mercurials, such especially as calomel, in persons who tolerate it easily, laxative waters, at a spa or otherwise, colchicum, salicylates, iodides, strict diet, are some such means. We hear more about "intestinal toxins" than we probably comprehend; whatsoever they may be, such medicinal means would contribute to their dissipation also. Flatulent or catarrhal states of the stomach must be detected and relieved. Again, as Dr. Sydney Phillips well says, as in obscure cases of heart disease we ought to remember that the morbific element may be syphilis, so in angina pectoris likewise we shall give the patient the benefit of this doubt, as we do in obscure cerebral cases.

To promote normal metabolism exercise is of much importance; but as exertion raises arterial pressures, at any rate at the beginning of exercise, we shall have to balance tentatively in the individual the one indication against the other. Dr. Francis Hare has used the familiar experience that angina pectoris is prone to come on at the initiation of exertion, but, as the exercise is continued, to diminish and pass off, to suggest that such a patient should be encouraged to enter upon gentle exercise in this cautious fashion; if possible so delicately as not even to foreshadow the pain, and, as he perceives the immunity, to proceed quietly forwards. Thus, Dr. Hare thinks wholesome exercise may be pursued without prejudice to the local disease, which, in his opinion, lies in the heart itself. Such advice loses something of its propriety, as we shall see presently, if my opinions on the seat of angina pectoris are adopted. Still, as there comes a time when a sprained ankle must be gently inured again to activity, so must the recovering anginous patient, whatever his lesion, sooner or later be led back to bodily exertion. Yet any premature stress upon an affected part, and notably on a part so vital, is to be deprecated.

Diet likewise presents two faces to us; that which may reduce high pressures, or prevent them, and that which may counteract a particular morbid habit. Broadly speaking, we have all been

accustomed to consider in cases of arterial plethora, even in cases in which the bodily habit is not gross, that animal meats should be reduced, and that the nitrogenous food should consist for the most part of simpler materials, such as caseins and the like. Here, however, Dr. Hare has laid siege to our prejudices and declared that such patients should eat two meat meals a day; furthermore, that our face should be set not against animal foods but against the carbohydrates—against bread, against potatoes, against farinaceous puddings, against sugars, and so on. Such rules for the present can rest only upon empirical grounds; and, for my part, I think that the chief rule is strict moderation in whatsoever kind. As Prof. Chittenden has shown us, the ordinary man eats far too much, and has yet to realize that in so doing he throws a lifelong strain upon his excretory functions, a strain which in later life, when exercise is less and the respective organs are worse endowed with margins of safety, tells cumulatively. And till Dr. Hare's doctrines are verified by independent observers, I am sure he will be the first to acquiesce in our observing our old rules in the main, though with open minds to their probable fallacies. We shall all agree that no full meal should be eaten under fatigue nor under vexation; and, indeed, that in angina pectoris all meals should be restricted in quantity. Or if, on the other hand, appetite be defective, it may be solicited by a previous draught composed of hydrochloric acid, pepsine, and perhaps a little strychnine or other bitter stomachic of a more carminative kind, not so much to aid in the digestion of the meal as to arouse the languid viscus by its customary excitants. Moreover, in respect of the carbohydrates this is true, that they are the kind of ingestum most concerned in the disengagement of flatulence, and in this respect must be ordered sparingly and with discretion of form and cooking. Alcohol, strong tea or coffee, and other excitants of the heart must be forbidden.

One means, which in my opinion is essential, although not indiscriminately applicable, is bed; not indiscriminately applicable, yet now unfortunately sadly neglected! I admit that, to realize its importance, my doctrine concerning the seat of the malady has to be adopted; this doctrine will be adopted, it is now finding adoption, but meanwhile *plectuntur anginosi*. To realize that angina is an aortic lesion is to realize the solution that the treatment, in this respect of rest, ranges itself with that of aneurysm. From the date of the first attack of angina the patient should be sent to bed as definitely as if he had revealed an aneurysm. The heart, it is true, cannot be put in dock,

though every stroke of it may tear open the tender part; but we must reduce its labor as much as possible, making the pressure for a while as low as may be consistent with the balance of health. This purpose we can attain by bed and vaso-dilators, in co-operation with the constitutional measures previously described. On the other hand, I know but too well how cautious the physician must be in ordering an elderly patient to bed, or bed and couch, even for three months. To send an old man to bed for some weeks may be to consign him to a living grave; his lungs may become edematous, his energies may flag, and he may never get about again. Or a perishing heart may be kept agoing only by a certain activity of oxidation, and in muscular idleness it may dwindle more and more. In young subjects with sound cardiac muscles and arteries this deterioration is less menacing, yet among them there are the fretting people, the melancholy people, and the indolent and gluttonous. Nevertheless some years ago I constrained a man of over 80 years of age, a wiry, cheerful, atheromatous person (of the decrescent form of atheroma, not the hyperpietic) to keep bed and couch for many weeks, and thus we cured an angina pectoris which had lasted a considerable time, and enabled him to lead a painless life for not a few subsequent years. This gentleman was in a position to be waited upon, amused, carried to a Bath chair, and so forth, diversions which are not within the reach of many sick persons. Dr. Johnson, of Cambridge, will testify to effect of bed in bringing about permanent relief in a grievous case of recurrent angina pectoris in a comparatively young man, which, when we met, had culminated in the *status anginosus* assaulting him again and again with terrible violence.

Of medicinal means of abating the aortic pressure we happily have not a few. Our fathers used antimony for this purpose, and no doubt with some halting advantage. The value of the nitrites in this direction is too well known for me to enlarge upon them; still we are always learning, even in well-worn subjects. If it be said that an effect so transient as theirs cannot be of more than passing service I may inform the reader that in our laboratories Dr. Harvey, of Toronto, has proved on rabbits that to compress the abdominal aorta for half an hour daily for two or three weeks suffices to rend and destroy the arch of the vessel: and we have learned that chloride of barium and digitalis have, by virtue of their pressor effects, an unmistakably evil influence in angina pectoris. To reduce tensions at intervals, even for short periods, seems to give the parts a chance to recover, as the normal heart recovers during the pauses which

seem too brief for such profits. Moreover, Professor Osler assures us that we are too chary in the use of the nitrites; and we drop them too soon. In case of necessity he is not afraid to push the 1 per cent. solution of nitroglycerine as far as 30 minims thrice daily. I am bound to add, however, that in not a few cases I have noted a disposition to a nitrite habit; so that, whatsoever the doses decided upon by the physician, care should be taken not to let the patient drift into an indefinite practice of such medication; indeed, it is desirable that, if possible, the physician should hold the prescription in his own hands. Sir William Gowers advises us that in many conditions, at any rate, the nitrites have more than this virtue of temporary reduction; that by prolonged use they have a "steadying effect on the vaso-motor centre"; to this end he is wont to administer them for months together, sometimes with the addition of a little strychnine. We are in need of continuous curves of the arterial pressures of persons under vaso-dilators, that we may know how far they have such effects, or lose their power, or are followed by reactions. I may add that, if the primary condition be hyperpiesis, an unknown measure of vaso-constriction secondary to pain, or to nervous apprehension of pain, continually supervenes.

It is a remarkable contrast between science and empiricism that while the value of the iodides in arterial diseases—in arterio-sclerosis, in aneurysm, in angina pectoris—is universally admitted, and indeed asseverated by clinical practitioners, experiment can find no explanation of this maxim. Meanwhile, explanation or no explanation, we are bound to give the patient the probable benefit of these salts. Unless in the suspicion of syphilis, the ordinary doses of 3 to 5 grains thrice daily are sufficient; this prescription is to be continued for six months, with, of course, such temporary suspension as any intolerance of the patient may indicate. Many persons who resist iodism in its specific form are, on awaking of a morning, disgusted by the coppery taste of it. No pretermissions serve to avert this disgust, but I am disposed to infer, from a slight experience of it, that iodipin, even by the mouth, has less of this disadvantage. It is an iodised oil, and is therefore an organic iodine compound.

Venesection commends itself to us as a reasonable remedy in those cases of angina pectoris in which hyperpiesis is primary and persistent. I have not used it, but Dr. Graham Steell warns us that to abate a catamenial flow which, even if excessive, may be beneficent in reducing arterial pressures in such cases, or likewise to arrest a hemorrhoidal discharge, may be followed by an aggravation of the conditions precedent to the attacks.

Issues, such as moxas and setons, are not without their advocates; such agents are not at present in favor, and they have obvious inconveniences. Nevertheless, I am prepossessed in their favor by the testimony of our ancestors, and would gladly agree to a trial of them. Dr. Knott reminds us that Dr. McBride, of Dublin, in A. D. 1776, and Dr. Darwin recommended issues of one or two peas on the inside of the thigh. Even in the later eighteenth century wine was forbidden to sufferers from this angina, then newly described.

Baths may come into vogue even for angina pectoris, but at present I regard them as too risky, in high pressure cases at any rate, for general use. If used at all it would be with such various hedging about as to make their application too precarious for practical purposes. I know that at certain spas, even in angina pectoris, baths are prescribed, but spa reports require for their assimilation more salt than is always at hand. Concerning the principles of artificial exercises I have said already as much as can be said in this brief article. As to massage also, and especially as to abdominal massage which is recommended for angina, we have to bear in mind Dr. Harvey's experiments on compression of the abdominal aorta. If massage—not of the region of this great vessel and of the splanchnic area, but of the muscular system—can be gently employed, without pressure effects on the arterial system with which it is so closely allied, so as to counteract any ill-effects of rest in bed, so much the better. The practice on each sitting must, however, as we have seen, be stealthily initiated; and till both operator and patient have been intimately watched, and pressures estimated with the help of the sphygmometer, the physician must closely supervise every performance of it.

The "high frequency" electric current has been prescribed against that prevalence of high arterial pressures upon which angina pectoris so frequently—though by no means always—depends. Imposing performances often succeed for a time by virtue of the emotional interest excited in the patient by a new remedy and such may be the only worth of high frequency currents; nevertheless, in hyperpiesis, and even in some cases of ominous stenocardia, I have witnessed good results which suggest further research into their efficacy.

Eccentric physical causes, such as irritation in any sympathetic part of the body, as, for example, by a loaded colon, an eczema, and so forth, must be sought with vigilance and promptly removed. Dr. F. Hare has suggested that, as in asthma, so in angina pectoris, a nasal lesion might determine the attacks.

In the palliation of the attacks themselves we are not without remedies, of which the nitrites, discovered in this connection by Sir Lauder Brunton, are the chief. On their use and application I need not dwell. For my part, I would urge as importunately the need of blocking the reflex by which the heart is inhibited, and, it may be, fatally. This, so far as I know, is best done with atropine, and I beg all my anginous patients to observe the continuous use of this prophylactic until the liability to an attack seems to have vanished. As the tolerance of this agent is established, the daily doses must be increased accordingly. Besides, on the access of an attack I order a dose to be promptly injected under the skin. Morphia, in the vogue of the nitrites, is not to be forgotten; it likewise probably blocks the dangerous reflex path, besides its great efficiency as a palliative. In a series of attacks, and in their imminence, it is invaluable. It is, of course, to be injected subcutaneously. It is of little use to inject less than 1-4 grain at once, or, in case of any particular hesitation, 1-6 grain, followed in ten minutes by another sixth. In cases of this class the bogy of morphinism need not dismay us. Chloroform appears to me likely to prove a very treacherous ally, though its aid is accepted by practitioners no less eminent than Balfour and Professor Osler. The fatal events which have ensued upon the use of this drug for anesthesia are of the same inhibitory nature as the peril of angina, and I cannot counsel any interference which might act in the same sense.

As regards incidental dangers, in Cheyne-Stokes breathing the inhalations of oxygen and carbon dioxide alternately, or of one of them in its appropriate interval, might be helpful. In impending death I recommended some time ago artificial respiration; independently, no doubt, Dr. A. Morison tried it on a patient who was slowly dying, but without success; perhaps in this case the death did not result simply from inhibition but from irremediable static conditions in more than one organ of the long-tormented body, wherein death was the only issue and the only consolation. I still think, nevertheless, that, in a simple case of inhibitory syncope by the violence of anginal pain, artificial respiration may yet score a success.—*Folia Therapeutica.*

Progress of Medical Science.

MEDICINE.

IN CHARGE OF W. H. B. AIKINS, F. A. CLARKSON AND BREFNEY O'REILLY.

Pleural Effusion and its Treatment. Bradshaw lecture delivered by Sir James Barr, November 5th, 1907.

Sir James Barr's work on the Pleura is too well known to need mention. In the paper under discussion he has just endeavored to elucidate certain points in its physics. Among these he draws attention to the fact that effusions due to high venous pressure in the right auricle are aggravated by the imperfect values of the azygos veins, they being unable to withstand the backward pressure of the blood, and in consequence a passive congestion of the pleural membranes ensues, and this is especially likely to occur if there be present at the same time a fall in arterial tension.

Barr believes that the effusion, even in tuberculous cases, may, under the method described below, be removed at a much earlier period than has up to the present been considered safe; after the removal of several pints of fluid in a given case a cavity would be formed in the thorax, which cannot exist under an atmospheric pressure of 15 lbs. to the square inch. It is filled in part by (1) carbonic acid gas from the serum; (2) more or less expansion of the collapsed lung; (3) return of displaced organs and mediastinal contents, and further expansion of the opposite lung; (4) increased quantity of blood; (5) elevation of diaphragm; (6) and falling in of the chest wall. If the amount of fluid removed be excessive or the lung be collapsed and bound down, even all the above factors may fail to completely fill the cavity, and it is to aid in filling this space and to reduce the negative pressure that Sir James Barr injects sterile air into the pleural sac after tapping. Thus the danger of hyperemia and edema is partially overcome. His technique is somewhat as follows: A siphon is used to withdraw the fluid, care being taken to desist before dyspnea occurs; a quantity of sterile air equal in volume to the fluid removed is now introduced; he then re-establishes the syphon and completely withdraws the remaining serum, in its place injecting 4 c. cm. adrenalin solution (1-1000) diluted with 10 c. cm. of sterile normal saline solution, and, if

considered advisable, more air to make a total amount equal to 1-2 to 3-4 of bulk of effusion removed.

The adrenalin contracts the vessels and lessens secretion. Dr. Ewart, of London, has recently been injecting it into the pleural fluid preparatory to withdrawal, and has achieved success in thus stimulating its absorption.

Barr also recommends elimination of common salt from the diet, especially in sero-fibrinous cases; when there is a large amount of effused fibrin the use of citrates is advantageous, and the introduction of trypsin to limit or absorb adhesions. At present he is investigating the injection of liquid paraffin as a lubricating fluid as a protection against adherent pleura.

In empyemata he recommends drainage from the most dependent part, with a valve of gauze and oiled silk to prevent entrance of air and permit exit of pus. The side is to be firmly strapped, the patient using respiratory gymnastics to promote expansion of the lung; and, finally, appropriate vaccines as described by Wright may prove of the greatest benefit.

Estimation of Fat in Feces.

The following is an abstract of a paper read at the seventy-fifth annual meeting of the British Medical Association on the above subject by I. Walker Hall, of Bristol, and refers to the estimation of the total quantity of fat evacuated. 1. Before and after administering a known quantity of fat, prescribe fluid extract of hematoxylin. 2. Transfer entire stools to mortar, add normal KOH solution, stir till all lumps are dissolved, add distilled water to make up 500 c. cm., and shake. 3. Heat 50 c. cm. for 20 minutes. 4. To this add 50 c. cm. of 95 per cent. alcohol; heat for 20 minutes. 5. Add strong HCl until strongly acid. 6. Heat 20 minutes, filter, evaporate to 50 c. cm. 7. Take 5 c. cm. and determine percentage in a "milk" centrifugal tube, and multiply result by 5, or take 20 c. cm. in a Schmidt-Werner tube and estimate; after calculation from the dried residue of the aliquot portion of the ethereal extract, multiply result by 25. If the process be interrupted at (3), then the amount of fat extracted approximates that of the fatty acids; this result deducted from the total amount equals that of the neutral fats present.

Subcutaneous Injections of Air to Relieve Pain.

Gubb, of Algiers and Aix-les-Bains, in the *British Medical Journal* of November 9th, 1907, describes the above method, originated by Dr. Cardier, of relieving pain in obstinate cases

of neuralgia. The results probably are due to mechanical action producing stretching of the finer nerve filaments. A hollow needle, attached to which is a rubber bulb, beyond which again is a glass tube filled with gauze, the whole apparatus being sterile, is all that is necessary. After plunging the needle through the skin over the seat of pain, and making sure a vein has not been injured, insufflation is gently undertaken. The skin, at first blanched, later becomes hyperemic; the air travels widely, accompanied by subcutaneous crepitation; cutaneous sensibility is at once diminished; next, the puncture having been sealed with collodion, the air must be alternately dispersed and brought together again by careful massage. Several days elapse before the air is absorbed.

Over regions such as the genital 200-300 c. cm. may be injected, whereas over the thorax 10-30 c. cm. will suffice. In sciatica inject over the lumbar region, outer side of thigh and superoexternal part of the leg, followed by systematic massage.

Gubb has also treated cases of neuritis with success, providing absolute rest is enforced.

A Case of Interlobular Serous Pleurisy.

Cases of interlobular purulent pleurisy are frequent enough, but those of interlobular serous pleurisy are almost unknown.

The classical picture of interlobular empyema reveals its course as divided into three stages—latent, apparent and crisis. Nothing can be said of the first. In the second we have a collection in the pleura, which develops especially towards the axillary region; percussion gives often a metallic sound; expectoration is scanty, and slightly mucous. The febrile process is established and lasts 30, 40 or 70 days until a providential crisis, emptying the contents into a bronchus, eliminates purulent and even fetid material. Such symptoms are almost entirely wanting in cases of interlobular serous pleurisy—hence it is rarely diagnosed. In the case reported by Seufferheld, the first symptoms noticed were slight fever and sharp costal pain. It was impossible to make a diagnosis until there was noticed a dullness of the upper convexity, with a tympanic sound; slight fever in the evening; copious indicanuria. One had to choose, apparently, among pneumothorax, pulmonic inflammation, diaphragmatic hernia. The Roentgen rays revealed an interlobular exudate, perfectly walled off from the diaphragm. The serous character was decided upon from the expectoration and from the nature of a free exudate in the pleura of the other side.—Translated from *Giornale Internazionale delle Scienze Mediche*, by HARLEY SMITH.

Pseudo-Diabetes.

Lebeaupir (*Journ. de Med. et de Chir. Prat.*, July, 1907) discusses that form of glycosuria in which the general health is unimpaired. Polyuria and polydipsia are absent; the urine in these non-diabetic cases shows unaltered specific gravity and quantity, and the "night sample" is free from sugar, which is only present during the day in small percentages; an excess of urea and chlorides is found, as are also leucin and tyrosin. These cases are midway between the temporary glycosuria found, on the one hand, in asphyxia, after anesthesia, in strangulated herniæ, etc., and true diabetes on the other.

Thus it is not uncommon to find sugar in the urine of young arthritic subjects, in children whose parents are subjects of gout, diabetes or calculi, in digestive disturbances, lesions of the central or peripheral nervous system, exophthalmic goitre, acromegalia, etc., and, lastly, in the puerperal state.

The treatment adopted is one directed to relieve the cause, as antiseptics in intestinal fermentation; Fowler's solution in azoturic forms; bromides, belladonna, etc., in nervous cases, and the results, providing true diabetes can be excluded, are most satisfactory.

The Significance of the Disappearance of Murmurs in the Course of Valvular Lesions of the Heart.

Although there have been reported some cases of mitral stenosis in which the disappearance of the murmur coincided with an improvement in the disease, and its reappearance took place only when compensation was more or less reduced; although there have been published cases of aortic insufficiency, in which the disappearance of the diastolic murmur happened coincidently with the cure of the disease, such disappearance, asserts Thomayer, in the *Gazzetta Medica Naliana*, is far from always being a favorable omen. There have, indeed, been known some cases of mitral stenosis in which the disappearance of the murmur was the expression of a weakening of the heart, and was due to the fact that the contraction of the left auricle was no longer energetic enough to produce a presystolic murmur. Thomayer had under his care a woman suffering from aortic insufficiency, in whom the disappearance of the diastolic murmur was followed by an accentuation of the second sound. Symptoms of asystole developed, and shortly afterwards the patient died. The post-mortem revealed the existence, in one of the semilunar valves, of a perforation, the result of the ulceration of a valvular aneurysm—two millimetres in diameter, and

having its edges formed of cicatricial tissue. It is thus easy to account for the disappearance of the murmur. Before the diameter of the perforation was lessened by the cicatricial tissue the blood could flow back during diastole, so as to cause a distinct murmur. As the cicatrization progressed, the perforation becoming gradually smaller, the reflux of blood was not sufficient to cause the murmur.

Thomayer refers to two other cases of aortic insufficiency, in which the diastolic murmur was heard only when the patients were standing; when they were recumbent there was perceptible only an accentuation of the second sound in the aortic area. This peculiarity was due to the great mobility with which the heart was endowed. When the patients were lying down the heart could withdraw itself from the anterior part of the thorax so that the diastolic murmur could no longer be heard.

Thomayer had already referred to the unreliable character of pericarditis with effusion; he had also shown that it was possible, through the existence of pulmonary emphysema, adhesions between pericardium and heart, and other circumstances, that the precordial dullness might be concealed or prevented from increasing. He also called attention to the abnormal mobility of the heart, as a cause of perplexity in the diagnosis of pericardial effusion; inasmuch as, having the power of falling back farther than usual, from the thoracic wall, when the patient is recumbent, any increase in the area of precordial dullness is thus rendered impossible.—Translated from *Giornale Internazionale delle Scienze Mediche,* by HARLEY SMITH.

OBSTETRICS AND GYNECOLOGY.

IN CHARGE OF ADAM H. WRIGHT, K. C. M'ILWRAITH, FRED. FENTON AND HELEN MACMURCHY.

Early Recognition of Uterine Cancer.

In an address, delivered to the Canadian Nurses' Association in Montreal, and published in *The Canadian Nurse,* W. W. Chipman spoke as follows:

"What I wish specially to mention to you to-night is the question of uterine cancer, making special reference to its early recognition. By what signs does it first make itself evident? It is these signs that I wish to impress upon you, for it is in your hands often that the responsibility rests. The woman confides in you more readily oftentimes, and naturally so, than in her physi-

cian. First, let me make a general statement, which I wish you always to keep in mind, and it is this: Any woman who has passed the change of life—by that I mean where her normal menstruation has for some months or years ceased, and who informs you that the menstruation has returned (she often laughingly, or almost boastingly, informs you of this fact, claiming that she has renewed her youth, that she is becoming young again)—I say, anyone who informs you of a blood-loss from the vagina after a period of amenorrhea, at the time of the menopause, treat it as a very serious matter. Question her closely, and if a recurrence of hemorrhage should take place, simply insist that she seek the advice of her physician. By doing this only will you be doing your duty. By doing this you will save lives.

"I wish then, to draw your attention to three chief signs of early uterine cancer. I am speaking now of women who are at or past the climacteric. For it is at that time that cancer is most likely to manifest itself. The most suspicious sign is, as I have intimated, hemorrhage—irregular hemorrhage, often small in amount, often bright red and occurring irregularly. Let this sign make you always very suspicious. Let this sign make you always insist that a careful vaginal examination be made by the woman's physician.

"The next most important early sign is a leucorrhea. By that I mean any discharge other than blood. Frequently it is thin, watery, meat-watery, as it is called, being slightly blood-stained. Sometimes it is brownish, and sometimes yellow. Any persistence of such discharges in a woman, especially after the menopause, should make you again suspicious of the presence of early cancer.

"The third sign, and the least important, is pain. Unfortunately, when the woman begins to complain of pain the condition is usually past surgical help.

"So I do not ask you to rely at all upon the symptom of pain. Do not wait for it. Hold in your minds the two signs that I have spoken of: hemorrhages, irregular hemorrhages, and persistent leucorrheal discharges. Whenever in your practice you meet women who speak to you of these things, treat the condition as being possibly very serious, and insist that they seek medical advice."

The Treatment of the Vomiting of Pregnancy.

Dr. V. E. Watkins, United States Army, remarks:

There are two forms of the vomiting of pregnancy presented to the clinician for consideration; first, the simple "morning

sickness," and, second, pernicious vomiting, or hyperemesis. The simple vomiting, fortunately, is the form most frequently encountered, and after a varying degree of annoyance to the patient will cease about the end of the third month of gestation. The treatment is largely expectant, as evidenced by the vast number of drugs which have been recommended for the condition. Modifications of diet to suit individual cases, regulation of the bowels, and the use of cerium oxylate in 2 to 5 grain doses will suffice.

Hyperemesis is always associated with an autointoxication, and this autointoxication as the causative factor must be recognized in order that the proper therapeutical measures may be instituted. In simple vomiting the urine is free from albumin, but in the pernicious form albumin is always present. But there is always a marked diminution in the amount of urea excreted. A pregnant woman, therefore, with vomiting, albumin in the urine, and a decrease in the quantity of urea excreted, is in a serious condition, and the treatment must be prompt and energetic. There is no drug known which will control this condition. The three principles involved in the treatment are nourishment, rest in bed, and stimulation. These patients lose their strength with remarkable rapidity, and should be put to bed as soon as evidences of physical weakness are manifested.

The nourishment of the patient is the most difficult problem. In some cases the withdrawal of all food for twelve or fifteen hours, with the patient in bed, will so quiet the stomach that small quantities of fluid will be retained. Milk, either plain or predigested, is to be preferred, and is to be given a teaspoonful at a time and gradually increased in amount until at least two quarts in the twenty-four hours are taken. The intake of fluids must be large, and the patient should be given water freely, preferably carbonated. In other cases the stomach will require more time before retaining the liquid nourishment, and it will be necessary to resort to rectal alimentation for a few days. For the depression of the heart, which is invariably associated with cases of any severity, strychnine is to be used. Improvement in the condition will be manifested by an increase in the quantity of urine, decrease in the amount of albumin, increased excretion of urea, and a gradual return of the patient's strength. If this line of treatment does not succeed, the only recourse remaining is to empty the uterus. Production of abortion will result in a cure if the operation is resorted to soon enough, but unfortunately it is in many cases postponed until the condition of the patient has become so serious that death is inevitable, whether abortion is induced or not.—*N. Y. Med. Jour.*

NOTE.—We desire to refer to a line of treatment whose merits are not properly appreciated. Give the stomach absolute rest for six to ten days. Administer enemata of salt solution, as follows: Inject as high as possible 10 to 12 ounces of salt solution, and repeat often enough to use 4 pints in 24 hours. When the rectum is intolerant a few drops of laudanum should be added to each enema. The salt solution thus injected is generally well borne, dilutes the toxins, and furnishes the needed liquids for the body.

Pure milk is not generally well borne. Milk diluted with soda water, and buttermilk are preferable. In many cases scraped beef is much more easily digested.

We quite agree with Dr. Watkins that the induction of abortion is sometimes indicated; but we have learned that this operation, even when "resorted to soon enough" (which may be considered as soon as a jury of obstetrical experts would decide), does not always result in a cure.

We have referred to the great interest which is now being manifested in "The Ammonia Co-efficient of Urine" in two former issues; and we are pleased to publish in this issue a review of Longridge's paper on the same subject by Dr. McIlwraith.—A. H. W.

The Ammonia Co-efficient of Urine.

Great interest was excited in the ammonia co-efficient of the urine and its relation to the toxemias of pregnancy by Whitridge Williams' article, which appeared in the *Johns Hopkins Hospital Bulletin* for March, 1906, and which was reviewed in the December number of this journal for 1906. In the *Journal of Obstetrics and Gynecology* for July, 1907, there appears an article, on the subject, by Nepean Longridge, Pathologist to Queen Charlotte's Hospital. In his preliminary classification we note that Longridge puts pernicious vomiting and eclampsia together. He refers to the fact that in the liver lobule degeneration in eclampsia is peripheral, and in pernicious vomiting central, but apparently attaches little importance to this fact. Williams, on the other hand, puts pernicious vomiting and acute yellow atrophy together. In both the degeneration starts from the centre of the lobule, and Williams shows that clinically they resemble one another in many points. In eclampsia the degeneration starts from the periphery, and clinically also it is separated from the other two. We think that Williams' grouping is the better one.

Anatomical Researches.—Under this heading Flexner's work

is quoted. He was able to produce lesions identical with those found in the toxemias of pregnancy by the injection of various kinds of toxins; but as to the origin of the toxin in pregnancy, we were left as much in the dark as ever.

Physiological Researches.—One of the main functions of the liver is the transformation of nitrogenous derivatives into urea. In the toxemias of pregnancy the liver is badly damaged. What changes result in nitrogenous metabolism? Folin's doctrine of proteid metabolism is then explained at some length, and as a further complication the question of acidosis or undue formation or retention of acids in the body arises. The conclusion of the argument is that there are two ways in which a high ammonia co-efficient may be produced:—

(1) Failure on the part of the liver to synthesize the ammonia into urea.

(2) Kidnapping of the ammonia by acids before it can reach the liver.

Longridge then goes into the evidence with regard to the variations of the ammonia co-efficient during health. Folin's law is quoted, that the percentage distribution of the nitrogen in urine among urea and other nitrogenous constituents depends upon the absolute amount of total nitrogen present. So that with a small amount of proteid in the diet, the ammonia co-efficient may be high, and vice versa. It is instanced also that in the urine of professional fasters, when the nitrogenous intake is low, the ammonia co-efficient may reach 10 per cent.—Williams' danger point—in perfect health. Ewing's work is quoted to show that a patient who is taking but little food may have a high ammonia co-efficient because she is oxidyzing her own fat, and not necessarily because she is suffering from any form of intoxication.

Therapeutic Evidence.—There is no doubt that good is accomplished in certain cases of eclampsia by thyroid extract. Oxidation is increased by thyroid extract. These facts seem to support the sub-oxidation theory of eclampsia. (We might also add that Stroganoff's work is of importance in this connection. He strongly advocated the administration of oxygen in the treatment of eclamptic convulsions, and his results were good.) The question of autolysis of the liver is also taken up. This article forms a valuable contribution to the discussion of the ammonia co-efficient question. K. C. M.

Editorials.

ASYLUM SERVICE IN ONTARIO.

It is well known that the Ontario Provincial Secretary is taking deep interest in the Asylum service of the Province. Since the visit of Drs. Willoughby, Clarke and Ryan we have heard much about the establishment of a Psychiatry clinic. We are told by Dr. Clarke that Germany, which up to a recent date was far behind England and France in the care and treatment of Insanity, suddenly devoted her energies to the problem, and to-day has left all other countries behind in psychiatric studies. Her psychiatric hospitals have placed within the reach of the medical student and practitioner the possibility of acquiring some knowledge of Insanity, and have shown the general public that mental disease is to be dealt with in the same manner as other diseases.

Dr. Clarke (*University Monthly*) also tells us something as to modern methods in the study of the insane patient; ordinarily such a patient when admitted to an institution is at once put to bed, and kept there for sometimes perhaps a week or more, until his condition physically and mentally is inquired into. His complete examination may take many hours, the physiological analysis alone occupying much time. His history from childhood is inquired into, and no sphere that is likely to afford information is left untouched. A cerebro-spinal fluid examination when necessary is made, and the result is discussed by a conference of the staff, and the line of treatment mapped out. The amount of detail required would surprise one not conversant with the exactions of modern science.

It is expected that a new Psychiatric clinic will be built in Toronto in connection with the new hospital. We are told there will be a building with accommodation for about 100 beds, and a large staff of attendants will be provided for the care of these acute cases. This will probably be in some respects similar to what they call in Glasgow a receiving hospital, where persons suffering from mental disorder are sent. The patients in such

hospital are treated and discharged when cured, or sent on to a lunatic asylum if incurable. It is said that in Glasgow more than half of the patients thus treated are cured.

SCIENTIFIC AND PRACTICAL.

It would seem in these modern days that we have reached a stage when we should consider that science and practice are not antagonistic. We know that in the past, for two or three thousand years at least, there have been conflicts in opinion as to the scientific and practical. It is scarcely necessary to go back to the time of Hippocrates, but we might well consider the discussions that have taken place during the last 30 or 40 years. The following very apt words on this subject are quoted from Dr. J. F. W. Ross' admirable address on "Ideals in Medicine," delivered before the Toronto Academy of Medicine: "A training is useless unless adapted to the real needs of the person trained. The Germans have laid this truth to heart, for their regulations expressly provide that the examinations in physics and chemistry 'have to keep particularly in view the *requirements of the future physicians.*' While the Germans have been making a march in advance we have been retrograding owing to our acquiescence with the demands of the teachers of purely scientific subjects. Teachers of physiology and chemistry are intent on turning out physiologists and chemists, and not on turning out well-trained physicians to heal the sick." The last sentence may not be strictly correct as to all such teachers, but certainly the general tendency is in the direction indicated.

As we wish to make no reference to any present teachers, we shall go back to the days of a certain teacher of chemistry, who was possessed of great ability and a profound knowledge of his subject. His lectures, while most admirable for advanced students in chemistry, were practically useless for the average medical student. This fact illustrates the truth of Dr. Ross' contention that in some cases professors aim at the production of pure scientists—not practical physicians.

We want in Canada a happy medium between pure science and narrow empiricism. We want practice founded on science.

We cannot improve much on the words of Sir Thomas Watson, of London, England, to his students 40 years ago, although even then he was only paraphrasing a quotation from Lord Bacon:

"Be not like the empiric ant who clutches from every side indiscriminately for present wants, nor speculative like the spider, who, seeking no materials abroad, spins his web of sophistry from the recess of his inner being; but imitate rather the praiseworthy bee, who, gathering crude honey from various flowers, stores it up within, and by his own operation matures and perfects it for future use."

A LITTLE BROWN DOG.

An English dog has got very much into history. In 1904 the International Anti-vivisection Society erected a monument to a brown spaniel that had died in a series of vivisection experiments. The statue took the form of a fountain imbedded in a circular mass of granite, on which was the image of a dog with an inscription saying that it had been "done to death" by vivisection in a medical school.

The memorial, after it was finished at a cost of $750, was offered as a gift to several public bodies, who refused to accept it through fear of becoming embroiled in the quarrel between the vivisectionists and the memorialists.

Finally, the Battersea Borough Council accepted the statue after a stormy debate. The Anti-vivisection Society agreed to defray the costs of any proceedings, such as libel cases which were threatened, and deposited $1,500 as earnest money. The monument was placed near Battersea Park and dedicated to the public in 1906. From that time the statue had to be protected, especially from medical students. Considerable expense has been incurred by the Council in their endeavors to preserve the image of the brown dog; of late there have been two special policemen on duty day and night to keep the statue from destruction.

To add fuel to the flames of debate the Commissioner of Police

when making up his estimate for 1908, wrote to the Battersea Council and asked if it was prepared to pay $3,500 for protecting the statue. In answer, some members of the Board, as we are told by the Toronto *Mail and Empire,* fired back a hot demand, "If Battersea organizes a gang sometime of the medical hooligans to raid laboratories in order to destroy instruments or animal torture, would these laboratories be required to pay for protection from the police?"

The anti-vivisectionists expressed their determination that the famous statue was to remain in the Park, even if they have to pay $5,000 a year to guard it from disfigurement.

THE MOSETIG BATISTE.

No rubber tissue for surgical or obstetrical purposes has ever proved in all respects satisfactory. Dr. Chas. P. Noble, of Philadelphia, published a short article in the *New York Medical Journal,* October 12th, 1907, in which he recommended the medicated batiste as a useful addition to the armamentarium of the hospital. The lighter kinds of rubber tissue are friable, while the heavier rubber cloth, in the shape of draw sheets, aprons, etc., is difficult to sterilize without destroying it.

Dr. Noble says that in Europe batiste has been used for a long time, to take the place of rubber dam and heavy rubber cloth, and also for many purposes for which the rubber tissues are not adapted.

The ordinary batiste, which is said to be named after the alleged first maker, Batiste, of Cambria, France, is a light cambric, or lawn of fine linen, or cloth of similar texture made of cotton. For a time the so-called Billroth batiste was extensively employed as a protective covering for the purpose of keeping patients dry during operations. The Mosetig batiste is used very largely in Europe to-day. It is said that it will stand sterilization in the pressure sterilizer for at least ten sterilizations.

Dr. Noble thought highly of it when he first saw it used in Europe, and had a quantity sent into the United States to be

used in the operating room instead of the rubber apron. It is also useful to put round the necks of patients who are vomiting, to protect the pillows and bedding. As it lacks odor and is quite flexible, it is very satisfactory for such purposes. It is much used in Europe for abdominal surgery, more especially for anastomosis, to assist in shutting off the peritoneal cavity from the incised bowels.

UNIVERSITY OF TORONTO.

The following rules as to salaries have recently been made by the Board of Governors:

In the Faculty of Arts, demonstrators will receive a minimum salary of $800; lecturers a minimum salary of $1,200, increasing at the rate of $100 per annum until $2,000 is reached; associate professors a minimum salary of $2,100, increasing at the rate of $100 per annum to $3,000; professors, a minimum salary of $3,100, increasing at the rate of $100 per annum to $3,600. It shall be in the discretion of the Board from time to time to advance the salary of a professor to $4,000.

Regulations have also been made for deductions from the salaries of 5 per cent. to 15 per cent. for the Retiring Fund.

In the Faculty of Medicine it is recognized that there are two classes in the Staff, namely, those who give their entire time to their duties, and those who are in active practice and devote only a part of their time to academic work. In the former class are at present professors of pathology and anatomy, and lecturers in pharmacy and pharmacology. For this the salary basis will be the same as in the Faculty of Arts. In the other class the salaries will stand as at present with some unimportant additions. The salaries in this class are considered rather in the nature of honorariums, than as representing the value of the services rendered.

The 77th Annual Meeting of the British Association for the Advancement of Science was held at Leicester, July 31st to August 7th. The association will hold its meeting in Dublin next summer, and will come to Winnipeg in 1909.

ONTARIO MEDICAL ASSOCIATION.

Provisional Programme.

The Committees on Papers and on Arrangements have pleasure in submitting the following programme for the twenty-eighth annual meeting, to be held in Hamilton, in the College of Music Building, James Street South, May the 26th, 27th, and 28th. The present arrangement of papers will not necessarily be adhered to, as a new grouping of subjects may be deemed advisable before the issuing of the final programme. We believe that no programme has been sent out in the history of the Association more replete with interest from the first item to the last than this promises to be. Every practitioner in the Province can well afford to set aside these days for attendance at Hamilton.

The sectional plan of meetings has been adopted, and will be enlarged if the papers will permit of doing so. Sections will meet in the mornings, the afternoons for the addresses and subjects of general interest, while the evenings will be devoted to entertainment.

Tuesday, May 26th.

Surgical Section—

L. W. Cockburn, Hamilton—"The Treatment of Acromio-Clavicular Dislocation."
H. A. Bruce, Toronto—(Title to be sent.)
N. A. Powell, Toronto—(Title to be sent.)
H. B. Lyle, Surgeon to St. Luke's Hospital, New York—"The Hyperemic Treament."
Clinic and Luncheon at the General Hospital.

Medical Section—

W. L. Silcox, Hamilton—"Opsonins." Discussion to be led by W. Gibson, Kingston.
W. Goldie, Toronto—(Title to be sent.)
Adam H. Wright, Toronto—"Puerperal Septicemia."
J. Sheahan, St. Catharines—(Title to be sent.)
Benson Cohoe, Assistant Physician to the Roosevelt Hospital, New York.
Clinic and Luncheon at the General Hospital.

General Session—Afternoon.

President's Address.
Symposium: Arteriosclerosis—
Pathology of—J. J. Mackenzie, Toronto.

Cerebral Manifestations—Colin K. Russell, Assistant in Medicine, McGill University.
Aortic Arch Manifestations—Thos. McCrae, Associate Professor in Medicine, Johns Hopkins, Baltimore.
Muscle Manifestations—Harry C. Buswell, Associate Professor in Medicine, University of Buffalo.
Visceral Manifestations—J. H. Bauer, Hamilton.
Treatment—H. A. McCallum, London.

Evening—Smoking concert at the Yacht Club, Burlington Beach.

WEDNESDAY, MAY 27TH.

Surgical Section—

J. P. Morton, Hamilton—(Title to be sent.)
F. N. G. Starr, Toronto—(Title to be sent.)
Edwin Seaborn, London—(Title to be sent.)
G. T. McKeough, Chatham—"Mechanical Ileus, Operation, Recovery, Remarks on the Treatment."
W. E. Olmsted, Niagara Falls—"Ulcer of the Stomach."
E. E. King, Toronto—(Title to be sent.)

Medical Section—

G. S. Glassco, Hamilton—(Title to be sent.)
J. R. Stanley, St. Mary's—(Title to be sent.)
R. J. Dwyer, Toronto—(Title to be sent.)
D. Dunton, Paris—(Title to be sent.)
F. Fenton, Toronto—(Title to be sent.)
George Hodge, London—"The Treatment of Pneumonia."
K. C. McIlwraith, Toronto—(Title to be sent.)
R. Ferguson, London—(Title to be sent.)

General Session—Afternoon.

Address in Surgery—Charles L. Scudder, Surgeon to the Massachusetts General Hospital, Boston.
G. E. Armstrong, Professor of Surgery, McGill University.
V. P. Gibney, Professor of Orthopedic Surgery, College of Physicians and Surgeons, New York.

Evening Session—Dinner at the Royal Hotel.

THURSDAY, MAY 28TH.

Surgical Section—

H. Sinclair, Walkerton—(Title to be sent.)
S. M. McCoy, St. Catharines—(Title to be sent).
A. E. Garrow, Associate Professor of Surgery, McGill University—"Duodenal Ulcer."

H. Sanderson, Detroit—(Title to be sent.)
D. E. Mundell, Kingston—"Pancreatic Cyst."

Medical Section—

D. King Smith, Toronto—(Title to be sent.)
J. T. Fotheringham, Toronto—"Malignant Endocarditis."
A. R. Gordon, Toronto—(Title to be sent.)
Campbell Howard, Assistant in Medicine, McGill University.
G. R. Cruickshank, Windsor—"The Treatment of Appendicitis."
J. C. Meakins, Pathologist to the Presbyterian Hospital, New York—"Rheumatism."

General Session—Afternoon.

Address in Medicine—Charles G. Stockton, Professor of Medicine, University of Buffalo.
L. G. Cole, Radiographer to the Roosevelt Hospital, New York—Illustrated Lecture.
C. K. Clarke, Toronto—"Psychiatry in Relation to General Medicine."

MEDICAL STAFF REORGANIZATION AT TORONTO GENERAL HOSPITAL.

The Re-organization of the Visiting Staff of the Toronto General Hospital is now said to be complete. The whole scheme exhibits one very bad and rather nasty feature. Several men have had their heads pole-axed for simply attending faithfully to their duties, and leaving altogether out of sight politics, pull, etc. Now, this unsavory action on the part of either the Board or the medical advisers to the Board is abominable; and occurring as it does amongst medical men, who are sticklers for ethics, smacks of quackery. If this sort of slaughtering is to be a feature of hospital work every few years—and many of the young men recently appointed will bear in mind that their tenure of office is for a year only—then it is high time reform, thorough and lasting, should be inaugurated in all hospitals which receive governmental and municipal grants. Taxpayers, lay as well as professional, should have something to say as to the manner their money is spent. To deny the right of a practitioner, who is a taxpayer, or whose patient may be a taxpayer, to follow that patient into the wards of any hospital, irrespective of his being or not being on the visiting staff, does not seem just as just to that practitioner and that patient as it may be advantageous to the hospital and the visiting staff. In

other words, Boards care more for their hospitals and visiting staffs more for their appointments than either care for the patients. It is only the patient and the patient's doctor who is concerned in the case in hand. Every man who is licensed to practice is entitled to practice upon his patient in his own home. The conscientious doctor when he needs the aid of a confrere or specialist, he so advises. Why are there men in the medical profession who for a little questionable fame attached to a hospital appointment will deny the right of other of their regularly licensed confreres to practice in hospitals as well as outside? Why should a poor man, because he has not enough money to pay for his hospital maintenance, have taken from him the right, which he is entitled to as well as any one else, to choose his own medical attendant in any hospital? There are a great many medical men who do not care for hospital appointments. There are others who will pull out tooth and evulse nail to get them. Is their success in life so dependent upon this disgusting wire-pulling? We trow not. It would be just as great, just as distinguished, just as transcendent, if every physician and every surgeon had the privilege, as it is his right, to follow his patient and treat him in any hospital he liked.—*Dominion Medical Monthly.*

Canadian Hospital Association.

The next meeting of the Canadian Hospital Association will be held in the Parliament Buildings, Toronto, April 20th and 21st. Among the papers promised are: "How to Deal with Tuberculosis as a Social Problem," by Dr. W. J. Dobbie, Superintendent of the Consumptive Sanitarium, Weston; "The Unfinished Business of General Hospitals," by Dr. S. S. Goldwater, Superintendent Mt. Sinai Hospital, New York, and President of the American Hospital Association (which Association meets in Toronto in September next); "The Milk Supply," by Dr. Helen MacMurchy, editor *Canadian Nurse;* "Fumigation," by Dr. A. D. McIntyre, Superintendent of the General Hospital, Kingston; "Some Observations on European Psychiatric Hospitals," by Dr. C. K. Clarke, Superintendent Toronto Hospital for Insane; "The Hospital and the Public," by Del Sutton, editor of the *National Hospital Record;* "The Proper Length of the Period of Study for Nurses," by Dr. Henry Hurd, Superintendent of Johns Hopkins Hospital, Baltimore. The presidential address will be delivered by Miss Louise C. Brent, Superintendent of the Hospital for Sick Children, who will hold a reception to the delegates at the new Nurses' Residence on Easter Monday evening.

Personals.

Dr. Colin Campbell has removed from College Street to 93 Bloor Street West.

Dr. J. Milton Cotton, of Toronto, has removed from Simcoe Street to 210 Bloor West.

Dr. Jno. A. Lawson, of Brampton, has been made an associate coroner for the County of Peel.

Dr. James Algie, formerly of Alton, has removed to 75 Dewson Street, corner of Dovercourt Road.

Dr. Samuel Johnson, of Toronto, sailed from New York by the *Campania* on Feb. 1st, for England and the Continent.

Dr. Geo. McDonagh, of Toronto, left for Florida February 1st, expecting to remain either in that State or go over to Nassau for a few weeks.

Dr. W. P. Caven, of Toronto, after an attack of influenza in the early part of January, went to Atlantic City, February 6th, and remained there about two weeks.

Dr. George Elliott, General Secretary of the Canadian Medical Asociation, has been appointed Provincial Medical Examiner for the Royal Arcanum in Ontario.

Dr. Jno. Caven, of Toronto, had a severe attack of colitis in the early part of February. He left, February 14th, for Jamaica, where he expects to remain until about the 1st of April.

Dr. J. Orlando Orr sailed from New York by the *Cedric* for Naples. After travelling through Italy, Switzerland and France he will visit England, and return to Toronto about May 1st.

Dr. Emory, of this city, who was formerly registered with the College of Physicians and Surgeons of Ontario as a homeopath, had his registration changed in 1902 to that of a regular practitioner.

Hon. Dr. J. O. Reaume, Minister of Public Works and Fisheries for Ontario, was elected President of the North American Fish and Game Protective Association at the recent meeting held in Albany, N.Y., February 12th and 13th.

Dr. D. J. Gibb Wishart, Associate Professor of Laryngology and Rhinology in the University of Toronto, leaves early in March for Italy, where he intends to follow the clinics of Professor Massei and others in Naples, Rome, and Turin. Subsequently he will attend the International Laryngo-Rhinological Congress in Vienna in Easter week, which is being held to commemorate the fiftieth anniversary of the establishment in Vienna of clinical laryngology and rhinology by Turck and Czermak. Later Dr. Wishart will spend some weeks at the clinics of Professor Killian in Freiburg and Hammnel in Heidelberg, before going to England.

Obituary.

HENRY GOING, M.D., M.R.C.S.I.

Dr. Going, of London, Ont., died January 27th, 1908, aged 91. He received his medical qualifications in Ireland 66 years ago, and shortly after graduating came to Canada and settled in London, where he continued in active practice for over 60 years.

HARRY PATTERSON LOOMIS, M.D.

Dr. Loomis, of New York, died December 22, 1907, aged 49, He was a son of the distinguished Professor Alfred Loomis, whose text-books on medicine were for many years so popular in Canada. Dr. Patterson Loomis was an admirable physician and a good clinical teacher, and was very highly esteemed by his professional brethren and the public in general.

JOHN HENRY C. F. FISHER, M.D.

Dr. J. H. Fisher, of Toronto, died at his home, 18 St. Patrick Street, February 15th, aged 59. After a supposed slight attack of influenza, he resumed work on Thursday, February 13th. On the following day he was much worse, and died on Saturday afternoon. He graduated M.D. from Trinity University in 1888, and at once settled in Toronto, where he practised up to the time of his last brief illness.

FREDERICK J. BRADD, M.D.

Dr. Bradd, of Peterboro', died December 23rd, 1907, aged 46. He was educated in the Toronto School of Medicine, and received his degree of M.D. from Victoria University in 1888.

W. E. SPRAGUE, B.A., M.D., F.R.C.S. (Edin.).

Dr. Sprague, of Belleville, died suddenly, January 25th, 1908, aged 58. Being a member of one of the oldest families—the Sprague of the Bay of Quinte District—noted for longevity, the Doctor's death was a shock to his family and his many friends. He was a cousin of our friend, Dr. Sprague, of Stirling, who is so well known throughout the Province of Ontario.

FRANK HEYDEN MOSS, M.B.

Dr. Moss, formerly of Toronto, was instantly killed in a railroad wreck in California, Feb. 5th, 1908. He was a son of the late Chief Justice Thomas Moss, and a nephew of Sir Charles Moss, of Toronto. Shortly after graduating from the University of Toronto in 1892 he settled in San Jose, Cal., and practised in that town up to the time of his death.

SIR THOMAS McCOLL ANDERSON, M.D.

Sir Thomas McColl Anderson, Regius Professor of Medicine in the University of Glasgow, died suddenly January 25th, aged 72. He attended the annual dinner of the Glasgow Ayrshire Society and proposed the last toast on the list. On leaving the banquet hall he was suddenly seized with an attack of cardiac failure and died in a few minutes.

Dr. Knight died at Toronto Junction, January 11, 1908.

Dr. Milne, formerly of Port Arthur, died at Denver, Colorado, Jan. 3rd, 1908.

Mr. Wm. Rudolf, eldest brother of Dr. R. D. Rudolf, of Toronto, died at Biloxi, Miss., Jan. 5th, 1908, aged 43.

Correspondence.

REORGANIZATION OF THE MEDICAL STAFF AT THE GENERAL HOSPITAL, TORONTO.

To the Editor of The Canadian Practitioner and Review:

Dear Sir,—I have read with great interest letters and editorials which have appeared in the medical press upon the Hospital situation, and, on making careful inquiries, I find that the recently appointed Trustees of the Toronto General Hospital announced to the Medical Staff with much ostentation, and after, no doubt, grave consideration, that there was soon to be a reorganization of the Hospital, which would place that institution in the forefront of all similar institutions in the world. The Medical Staff waited patiently for the proposed changes, meantime performing their duties quietly and well. And now the appointments have been made. The expressed intention of the Board, to make merit the basis of all appointments, was departed from. The announcement that the staff would be numerically curtailed was not adhered to. A number of junior men associated with the teaching staff of the University of Toronto, and some others, have received appointments, and many non-school and some school men, also young, with great qualifications, tried accomplishments, and tested capacity, have been ejected from the staff without even a kindly acknowledgment of the great services which they have rendered to the institution. Now there is a disunited staff, a discredited Board of Trustees, a feeling of distrust in the institution, and an unpleasant professional atmosphere surrounding the whole matter.

Yours, etc.,

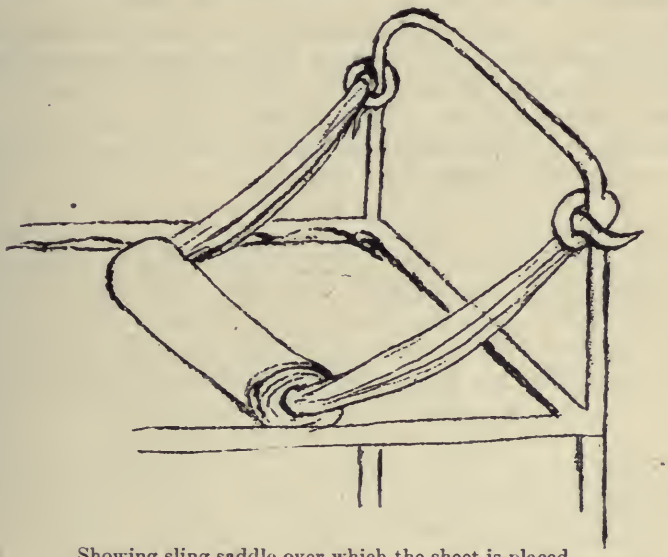
Old Practitioner.

Toronto, Feb. 20th, 1908.

ILLUSTRATING SLING SADDLE.

The difficulty in maintaining a patient in the semi-recumbent or more erect position in bed has been the experience of us all.

A simple device which I first saw applied at St. Mary's Hospital has given me excellent satisfaction, and while probably familiar to those who have visited the St. Mary's, might not be without interest to your readers. It consists of two sheets, one of which is attached to either side of the head of the bed and passes beneath the draw sheet about three feet from the head. Around this sheet is rolled another, thus making a saddle sling upon



Showing sling saddle over which the sheet is placed.

which, or better within which, the patient sits, being supported behind by the triangle or pillows. This sling effectually prevents slipping forward, or "sinking down in the bed" that patients experience in their attempts to sit up after stomach, peritoneal pus operations, or during convalescence.

I have modified this by the use of a pillow with the sheet, instead of the second sheet rolled round the sling sheet, finding that it is just as effectual in support and more comfortable.

ERNEST A. HALL,

Vancouver, B.C.

Book Reviews.

TEXT-BOOK OF PRACTICAL GYNECOLOGY FOR PRACTITIONERS AND STUDENTS. By D. Tod Gilliam, M.D., Emeritus Professor of Gynecology in Stirling (Ohio) Medical College; Fellow of the American Association of Obstetricians and Gynecologists. Second Revised Edition. Price, $4.50.

The general practitioner, as well as the student, will find in this work a practical and systematic treatise that will give the foundation for diagnosis and treatment of all the known diseases of women.

There is probably no special subject which is of so much interest to the general practitioner as gynecology, and the doctor who has a clear, practical knowledge of this subject is always well thought and spoken of by his patients.

This work is full of ideas, is very well illustrated, and should be read by every family physician.

HALL'S PHYSIOLOGY. A Text-Book of Physiology, Normal and Pathological. For Students and Practitioners of Medicine. By Winfield S. Hall, Ph.D., M.D. (Leipzig), Professor of Physiology, Northwestern University Medical School, Chicago; Member of the American Physiological Society; Member of American Association for the Advancement of Science, etc., etc. New (2nd) edition, revised and enlarged. In one octavo volume of 795 pages, with 339 engravings and three full-page colored plates. Cloth, $4.00, net. Lea Brothers & Co., Publishers, Philadelphia and New York. 1905.

Although the field in physiology is well covered with text-books, this volume has so many good points that it deserves the wide reception which it had in its first edition. We have seen no other short work on physiology that is written in such a clear way for the student, and, best of all, at the end of each chapter practical application is made of the facts stated. Too many medical students learn the subject in their primary years, only to forget it when they come to the bedside, but here is a work which will be of the greatest use. We have noticed some omissions. For instance, no mention is made of erepsin in the intestinal juice, and Chittenden's experiments are not referred to. But, on the whole, it is the best student's book we know of.

Selections.

Diseases of the Heart.

Huchard (*Journ. des Prat.*, Aug. 24, 1907) points out many mistakes made during the clinical investigation of and the treatment of patients suffering from diseases of the heart. He points out that far too much importance is attributed to physical signs and too little to functional troubles; valvular diseases are studied according to their anatomical situation, instead of according to their endocardial or arterial origin; the "central" heart is studied and the "peripheral" heart, as represented by the vascular system, is almost entirely neglected. Other errors are the non-recognition of the factor of alimentary intoxication as an important cause of the dyspnoea of heart disease; the failure to distinguish the various forms of angina and an ignorance of the clinical characters of aneurysmal neuralgia. Dyspnoea occurring in patients with heart disease is frequently considered to be uraemic in nature, whilst really being due to an alimentary intoxication, as is proved by the fact that suppression of meat and the institution of a milk diet will cause a disappearance of the dyspnoea, whilst a return to a meat diet will cause this symptom to return. The author has never known a systole to result directly from emphysema or asthma, as is generally stated in text-books. He states that a systole only occurs in emphysematous asthmatical patients when they have developed arterio-sclerosis. Patients from 45 to 60 years of age sometimes become "asthmatical" (?). Most of these "late asthmas" are really the result of arterio-sclerosis or are due to alimentary intoxication. The author points out that as true asthma can be modified very considerably by alimentary régime, it is necessary in treating a patient with this disease not only to prescribe iodide of potassium, but also to enforce a carefully-regulated dietetic régime. He denies that affections of the digestive tube can ever of themselves give rise to dilatation of the right side of the heart and to asystole, as has been stated by Potain. The so-called "cardiac" epilepsy does not exist; the association of heart disease and epilepsy in the same patient is accidental only. Reduplication of the second sound of the heart, which is said to occur physiologically in connection with the respiratory movements, is, according to the author, always pathological. Functional insufficiency of the aortic or mitral valves may really occur, although doubted by some, but only when there exists some defect in the myocardium. The most important

factor which separates coronary angina from other forms is that in the former there is an ischemia of the myocardium; this is proved by the fact that patients suffering from true angina pectoris die generally from syncope. The so-called gouty, diabetic and tabetic anginas do not depend directly on the several constitutional states, and do not yield to the treatment adopted for those conditions; the terms are, therefore, misleading. With regard to the disputed point as to the danger attached to women suffering from mitral stenosis who marry, the author considers that these patients may be allowed to marry, to become pregnant, and to suckle their children. An exaggerated tortuosity and increased tension of the walls of the temporal artery does not by any means indicate commencing or existing arterio-sclerosis, as is commonly supposed. Death from aneurysm is by many considered to be usually from rupture of the sac; in his researches on the cause of death in aortic aneurysm, however, the author finds this mode of termination far from common. Death may occur slowly, from asystole with compression of the auricles; from inanition due to pressure on the oesophagus; from pulmonary tuberculosis, favored by pressure on the pulmonary artery and vagus nerves, and from a form of arterial cachexia; suddenly, from hemorrhage and syncope; from angina pectoris, from laryngeal spasm; from compression of the air passages; from rupture of the sac into the lungs, bronchi, or trachea, pericardium, pleura, or spinal canal, or by embolism, etc. Another cause of sudden death in aortic aneurysm is a subacute anaemia. In heart disease pleural effusion occurs specially on the right side, due chiefly to the fact that pulmonary embolism is most frequent on the right side, and to the fact that a perihepatitis may extend upwards into the corresponding pleura; this effusion is latent, without inflammatory reaction, and almost always without dyspnoea, and, unless carefully watched for, may be entirely missed.—*British Medical Journal.*

Syphilitic Hepatitis.

G. Breccia (*Riv. Crit. di Clin. Med.*, Florence, 1907, pp. 665, 692) has collected from the pathological literature nine forms of hepatic syphilis, which he briefly discusses. Some of these are associated with fever, and he adds five cases of his own in which he diagnosed febrile syphilitic hepatitis. He notes that the fever may be either continuous, intermittent, remittent or irregular, and is generally of short duration only. He concludes that syphilis should be thought of in patients presenting several of the following signs and symptoms: Enlarged liver, with or with-

out splenomegaly; gastro-intestinal disturbances, anaemia with leucaemia or leucocytosis, jaundice, enlarged lymphatic glands, osteocopic pains, general and progressive debility, intermittent or remittent fever. Of course a history of syphilitic infection or congenital syphilis is very suggestive in such cases. In one of his cases that died the spleen was enlarged and very fibrous; while the liver was much enlarged, smooth, hard, and showed marked parenchymatous degeneration with but little increase in the fibrous tissue. Numerous references to the literature are given.—*British Medical Journal.*

Therapeutic Control of Malignant New Growths.

Bier, the ingenious creator of treatment by hyperemia, has been studying the influence upon malignant tumors of injections of the blood of other animal species, and reports upon the same in the *Deutsche Medicinische Wochenschrift.* He injected subcutaneously in the neighborhood of the tumor 10 to 20 c.c. of defribinated pig's blood; and in one of his cases observed a well-marked dissolution of the tumor mass, and in another, compression of the carcinomatous tissue by a smart inflammatory infiltration, resulting in the formation of connective tissue. In three cases of benign prostatic-hypertrophy, Bier also believes to have observed good effects, shown by the re-establishment of micturition. He does not consider, however, that the time has yet arrived for a general recommendation of his method. Some experiments upon animals recently reported by Bergell and Sticker from the Berlin Institute of Cancer Research, in the *Deutsche Medicinische Wochenschrift*, are also interesting and worthy of attention. Von Leyden and Bergell had already shown that by means of the injection of substances isolated from the normal liver of animals, they were able to bring about extensive destruction of human carcinomata, though the treatment was not devoid of toxic manifestations. Now, Bergell, in collaboration with Sticker, reports retrogressive metamorphosis in a sarcoma experimentally produced in a dog, by injection of this specific liver ferment at a period when the question of spontaneous cure could no longer be entertained, and which finally resulted in the complete disappearance of the tumor. Although the authors themselves do not seem inclined to overestimate the importance of these experiments for human therapy, they appear to me to be interesting enough to find mention in this brief report of the meagre fruits of the summer's work.—Prof. Strauss, of Berlin, in *Folia Therapeutica.*

Acute Rheumatic Fever.

S. Solis-Cohen, Philadelphia (*Journal A. M. A.*, December 21), recognizes acute rheumatism as an infectious disease, due it is probable, to any one of a group of organisms, possibly cocci, allied to the organisms of scarlatina and erysipelas. He also admits a certain constitutional susceptibility or diathesis, intimately related to nervous function, and especially with the vasomotor apparatus and perhaps also with the tissues of the organs of circulation. He reviews the medicinal treatment, largely empirical, that has been found useful—the precordial blisters, the use of alkalies, which has a sort of clinico-pathologic indication in the abnormally acid condition of the body fluids, the use of the tincture of the chlorid of iron and the salicylates. The use of the latter, together with the alkalies, is not contraindicated, and he generally uses them in combination. Ferric medication can also be associated in the "mistura ferro-salicylata," introduced by him twenty-two years ago, the revised formula of which is given in a footnote. Special care should be given to the condition of the mouth, nose and throat and avoidance of exposure to drafts for susceptible individuals. The resistance of the vasomotor system can be increased by such measures as massage, electric light baths and hydrotherapy. Regular and sufficient elimination is a necessary prophylactic measure and a regulated nutritious diet yielding a minimum of nitrogenous waste. The carbohydrates should be reduced and oils and fats substituted so far as possible. The diet, however, should be individualized to suit the case. The management of the attack is described in detail; the diet should be milk exclusively for at least two weeks and longer if necessary, the bowels should be kept open and the urine alkaline, but the most important measure is complete rest, and it depends on the case whether this be enforced for six weeks, which is Solis-Cohen's minimum, or whether it be continued to nine or ten weeks more. The great majority of subsequent chronic cardiac lesions are, he says, beyond question due to the neglect of the rest. Local treatment must be guided by the general condition and the patient's special needs; there are many applications and most of them are useful unless the patient has some idiosyncrasy. If the heart becomes involved during the attack the blisters and alkaline treatment can be kept up, but unless the articular symptoms are still severe, it is usually best to discontinue the salicylates. He speaks highly of the value of rectal, and, in severe cases, of intravenous injections of colloidal silver in cardiac complications, although he can not say they are always

curative. Bromid of strontium or ammonium may be useful in quieting restlessness; a precordial ice coil or ice bag is useful. The two principal things he insists on in the treatment of acute rheumatism and its complications are individualization and rest, and the latter in all cases is the measure of supreme importance.

The Diagnosis of Appendicitis.

R. T. Morris, New York (*Journal A. M. A.*, January 25), calls attention to the value of tenderness over the right sympathetic lumbar ganglion (one and a half inches from the navel on a line with McBurney's point) as a diagnostic sign in appendicitis in addition to the well-known McBurney's point. He gives the following general statement: 1. "In the early stages of an acute infective process of the appendix the right lumbar ganglia are tender and the left lumbar ganglia are not tender. (The left lumbar ganglia may be described for diagnostic purposes as lying an inch and a half to the left of the navel.) Under these circumstances the point here described is of secondary importance, while McBurney's point is of prime consequence. 2. (A) When an acute inflammatory process of the appendix has subsided, leaving a mucous inclusion or scar tissue, there may be no tenderness on pressure at McBurney's point, but there is tenderness at the point here described and no tenderness at the point of the left lumbar ganglia. (B) When the appendix is undergoing a normal involution process, with replacement of its lymphoid coats by connective tissue, digestive disturbances and various local neuralgias may be due to nerve filaments entrapped in the new connective tissue. There may be no tenderness at McBurney's point, but there is persistent tenderness at the point here described. There is no tenderness at the point of the left lumbar ganglion. (C) When the appendix is congested without the presence of infection, as in many cases of loose kidney, there may be little or no tenderness at McBurney's point, but there is persistent tenderness at the point here described. There is no tenderness at the point of the left lumbar ganglia." Under these conditions (A, B, C) the point here described is of primary importance, while McBurney's point is of secondary or no significance. It will be found useful in differentiating between appendiceal and pelvic irritations. If it is alone tender, it means appendix trouble. If both right and left lumbar ganglia points are tender it signifies pelvic disorder. If neither of these points are tender, the abdominal irritation must be looked for somewhere higher up than the pelvis or the appendix.

Miscellaneous.

RADIUM AND ITS DISCOVERER, MADAME CURIE.

The following, taken from *Harper's Bazar,* written by W. G. Fitzgerald, may be agreeable reading to many of our subscribers, who have shown such deep interest in the valuable contributions recently published from the pen of Dr. Louis Wickham, of the Curie Laboratory for Radium, in Paris:

"One day last spring I halted in astonishment outside the stately Sorbonne University in Paris. 'Surely,' thought I, 'this hoary centre of learning must have been turned into a show-place for the rank and fashion of all Europe?' Great titled ladies in sables and silk were alighting from superb motors, escorted by men whose names are known the world over—gray-haired savants, too, of the rank of Lord Kelvin, Sir William Ramsay, and Sir Oliver Lodge. Russian and American girl-students were pouring in, with the miscellaneous crowd of cosmopolis that represented the beauty, wealth, wit, and intellect of half a dozen nations. And last of all came King Carlos and Queen Amélie of Portugal, with the President of France, escorting Madame Fallieres.

"What could it be? The secret was soon out, for I caught a whisper—'Madame Curie is lecturing!' That marvellous woman, to whom is due the discovery of radium, which has revolutionized all previously held ideas of physical science—Madame Curie, the only woman ever appointed to a professor's chair in the great Sorbonne; a woman now courted by princes and governments. Did not the Shah of Persia himself take jewelled orders from his breast and attempt to pin them on this shyest of women?

"I went to the lecture. It was to be on 'polonium,' the first element discovered by Madame, and thus named for her native country.

"Believing that only the few cared to hear her, she had arranged to speak in a small class-room, seating barely thirty. But now the gay *monde* flocked from far and near, and there was nothing for it but the huge amphitheatre of the University of Paris.

"Even that was packed to the doors, and hundreds shut out, clamoring in vain to see and hear the world's greatest woman of science, whom the foremost thinkers of to-day have been proud to honor and accept as an intellectual equal. On the platform were arrayed a strange jumble of instruments and tubes, bottles

and jars, retorts and crucibles—a modern alchemist's workshop in which nature's secrets are laid bare.

"On the stroke of three an insignificant little black-robed woman stepped in, and the vast and brilliant throng rose with a thrill of homage and respect. Next moment a roar of applause burst forth. The timid little figure was visibly distressed, and raised a trembling hand in mute appeal. Then you could have heard a pin drop, and she began to speak.

"Of her lecture I will say no more. But as I had heard the greatest personages from Sweden to Vienna speak in tones of reverence of this woman, I determined to secure her strange story. This was most difficult on account of Madame's horror of publicity. Not long after the birth of her eldest child Irene, Madame Curie took a tiny cottage on the Boulevard Kellermann, near the Parc Montsouris, a district so remote that hardly any *cocher* knows where it is. To the ordinary Parisian the Boulevard Kellermann is only something little less remote than Timbuctu!

"Here 'the cleverest woman in the world' has a little ivy-covered house, lying back from the road, and spends her days carrying on her own and her late husband's work—not forgetting her little girls, Irene, who is nearly seven, and Eve, who is two and a half. A Polish cousin of hers helps her with the children; and there is also old Dr. Curie, her husband's father, to be taken care of—a patriarch well over eighty.

"No one appears to know anything of this illustrious woman except her next-door neighbor, Madame Perrin, who is almost in the relation of sister to Madame Curie. It will be seen that world-fame has absolutely no charm for this woman, nor had it for Pierre Curie. Once or twice he received a newspaper reporter through sheer kindliness of heart and unwillingness to appear discourteous. But his wife always declared she loathed reporters and publicity, and that no newspaper had a right to pry into her life.

"Now let me tell the tragic story of her life, love, and marriage. Marie Sklodowska Curie is just forty this year. Her father, Professor Sklodowski, taught science and chemistry at the University of Warsaw. It seems the salary was so paltry that Sklodowski could not even afford to hire a small boy to help in his laboratory, and so at an early age little motherless Marie, instead of playing with dolls and toys, was bustling about in a chemist's laboratory, surrounded by all the paraphernalia that were to become so familiar ere her name resounded the world over. Still, the girl must have had a vague longing to see

the world, for we next find her as governess in a Russian family travelling a good deal in Eastern Europe. She grew tired of this, though, and returned to Warsaw more passionately patriotic than ever.

"Indeed, the young woman was quite a political agitator. Her love for science, however, drew her to Paris, where she arrived almost destitute. Here she established herself in a cheerless garret so intensely cold that when in winter the little bottle of milk was left at her door it speedily turned to ice. Marie Sklodowska was at this time living on less than ten cents a day. She saved all the money she could for her precious books. Then came the fateful encounter with Pierre Curie. The Frenchman was seven years older than the girl, but he soon found in her a kindred soul, and, to her amazement, proposed marriage, so that among other things they might devote their lives to science. But at that time Polish patriotism and politics were uppermost in the girl's mind, and, without giving her lover a decisive answer, she returned to Warsaw.

"A fortnight later she received a pathetic letter from Curie, in which appears this passage: 'What a grand thing it would be to unite our lives and work together for the good of science and humanity!' Forthwith she returned to Paris and married the man of her choice. That marriage was, indeed, ideal. For eleven years they lived and worked in complete unity of thought and ideals. They were never parted even for a single day! Their first home was at Scéaux, about nine miles from Paris. So much time was lost, however, in journeying to and fro that they took a tiny apartment in the Rue de la Glaciere, in order to be near the laboratory of the Ecole de Physique.

"Already Madame Curie's reputation as a scientist in her own right was so well known that she was permitted to work with her husband in the laboratory—a privilege which had never before been granted to a woman. Oddly enough, France herself was slowest of all among the nations to recognize the genius of the gifted pair. Honors and tributes to their great researches came to them in embarrassing profusion, but not from their own country.

"It was Lord Kelvin, the venerable British savant, that first drew the world's attention to the Curies; and in May, 1903, the Royal Institution of Great Britain invited them to London to lecture. As everyone knows, this visit was a veritable triumph for the young couple; and Lord Kelvin himself, affectionately leaning on Curie's shoulder, proclaimed the marvellous discoveries of his French colleagues. Forthwith the Royal Society bestowed the coveted Davy gold medal on Pierre Curie.

"After Great Britain's recognition, Sweden bestowed the famous Nobel prize on both husband and wife. Then came laggard France with the Legion of Honor. But Pierre Curie replied to the government, simply declining the decoration, for it had 'no bearing upon my work.'

"But next day the Curies and Perrins went out to the quaint aerial village of Robinson two or three miles away, to have dinner in the tree-tops, where restaurants are established, and Irene climbed on her father's knee and put a red geranium in his coat. 'You are now decorated with the Legion of Honor,' the little one told him, gravely. And Pierre Curie replied, 'In this case I make no objection.'

"There came a time when the inveterate dislike of the Curies for public functions—dinners, receptions, lectures, and the like—had to be conquered; especially after the award of the Nobel prize by Sweden. Poor Marie Curie was, to put it mildly, not much given to dress. But now, protesting strongly, she had a *décolleté* black silk made; for President and Madame Loubet were giving a dinner at the Elysée Palace in honor of this marvellous husband and wife.

"This reminds me that both M. and Madame Curie have more than once flatly refused to lecture on their discoveries before royalty, alleging as an excuse that their subject would have no earthly interest for anyone who had not made a special study of it. They made an exception in the case of the Shah of Persia, but only because pressure was brought to bear upon them by the French Government.

"It was a very comic *séance*. The room was darkened, and the marvellous mineral they had discovered glowed uncannily. The Shah, greatly startled, leaped up and upset the case of radium. Then the Curies, in turn, were mightily alarmed for their precious atom, and refused to be comforted, even by diamond rings impulsively drawn from imperial fingers.

"The Shah was deeply offended at the cold rejection of all his gifts. The radium shown him was worth $30,000 a gram. It had been specially extracted from pitchblende, a black oxide of uranium found only in one mine, at Joachimthal, in Bohemia. Whether or not this wondrous 'living' substance will cure cancer is a question for the scientist. But its most wonderful property is that it gives off light of itself, and that without any apparent diminution of its force. In Paris they called radium '*le métal conjugal*' because it was the joint discovery of husband and wife. It was Madame Curie, however, who first noticed the strange properties of uranium, and drew her husband's atten-

tion to the researches she had been carrying on alone for many months.

"Curie at once recognized the far-seeing pioneer genius of his wife, and abandoned all else that they might work together and solve a problem so sensational.

"But just when world-fame came to them, tragedy came, too. One day last spring Pierre Curie, after lunching with some friends, was crossing the crowded streets of Paris, an absent-minded dreamer with high thoughts fixed on the mysteries of nature. And with the awful suddenness of such things he was struck down by a heavy truck. One of the wheels passed over his head and crushed out a great and noble life.

"So in her little ivy-covered cottage, lost in an out-of-the-way part of the city, you will find Marie Sklodowska Curie to-day—more retired and silent than ever, living only for her children and such benefit as she hopes to do the world by the exercise of her marvellous genius."

The Craze for Thinness.

Generally speaking, most of us eat too much, many members of the rich and learned classes "digging their graves with their teeth"; nevertheless there is a certain danger of going to the other extreme, as we were reminded by the excellent address of the President of the Sanitary Inspectors' Association at Llandudno, last week. Sir James Crichton-Browne, M.D., declared that all the fashionable food fads and follies of the hour are in the nature of deprivation; aldermen are beginning to look like laths, the tiniest portions are served at dinners, and even light wines are looked at askance. Leaving men out of the question, it is undeniable that a large number of women, both middle and working class, as well as the rich and fashionable, do habitually under-eat, and endeavor by one means or another to reduce not only stoutness, but the reasonable plumpness which is a sign of good condition, and, as often as not, of a good temper. Now, this is a bad state of things, both in itself, and too frequently in the means adopted to secure the desired thinness.

Fashion makers and novelists are, we believe, mainly responsible for establishing the long, thin, willowy figure as the ideal for women. Artists, whatever their sex, have certainly done little or nothing to support this svelte ideal; rather must we look to the fashion plates or the pages of novelists (chiefly, we fear, women novelists) for the idea that women to look "ladylike" must be tall, slim and fragile. The highest hu-

man ideal and expression of female beauty that the world has ever known—the Venus de Milo—is not thin or lanky, neither has she a small waist; she is simply perfectly proportioned, and that is the secret of her beauty. Rubens, we admit, erred on the side of stoutness, and one can hardly imagine his women being in the least intellectual; nevertheless his ideals are better than the thin, scraggy type at the other extreme of the picture. Also, as we freely admit, the fleshy women of the Georgian painters' ideals were too fat and decidedly vulgar; but the pendulum has swung too far the other way, and now even Mr. Gilbert's "plump and pleasing person" would be generally voted ungraceful and verging on the vulgar. Stout persons must, of course, dress with more care than those of medium figures, but thin persons it is impossible to dress with any pretense of affording pleasure to the beholder.

Thinness, moreover, is not only ungraceful; it is a possible source of danger. The majority of healthy children are fat. Animals in "good condition" are generally plump. Fat itself is nature's provision either against cold or famine. When from scarcity of food, lack of appetite, or sickness the individual is deprived of food, the body is nourished by the hitherto superfluous tissue. Fat is a protective to the muscles and organs lying underneath—one never knew a fat consumptive person. Of course, we know that rich or well-to-do people in England need never fear the cold or famine. Nevertheless the principle is the same, and a proper fatness is not only beautiful, but a natural protection against various dangers. Fat is an aid to beauty, for without it the human body would lose much of its grace. Without it there would be no fulness, no flowing lines, no pleasing contour, no soft undulations, no beauty, but only utility. To prove this one has but to look at the anatomical model. In this the skeleton is symmetrical, the muscles anatomically perfect, but without the fat and skin the figure is unpleasing, crude, harsh, and, artistically speaking, hideous. Let but the framework of bone and muscle be clothed with a natural proportion of fat, and perfect beauty is the result. It was through ignoring this fact, by studying and reproducing the muscular frame alone, that another set of artists produced the most unpleasing, though anatomically correct, school of drawing that reproduced the human figure as though intended mainly for medical students or the devotees of the modern mania for muscular development.

But if thinness be bad, the means employed to procure it are generally worse; in some cases they are positively harm-

ful. Many patent medicines and potions are distinctly deleterious, while most "systems" indulged in without proper medical advice do far more harm than good, quite apart from their attaining the undesirable end of slimness. Thus we read of factory girls in a northern town eating six lemons a day, rind and all, in order to appear emaciated and look "interesting." Worse than lemons, vinegar is sometimes drunk by persons who wish to reduce their figures, while gin was long supposed to have the power, and was used, to make people thin. We have even heard of pounded egg-shells being eaten with the food for the same pernicious reason. But, bad as these things are in themselves, they often lead to more dangerous habits. For the body weakened and vitiated by such agents demands and receives stimulation—too generally satisfied with alcoholic beverages or narcotics. In this connection it is of interest to note what a taste for "liquor sweets" is being developed. These contain, in a sugar or cocoa casing, a drop or two of rum, gin, or liqueur, and that they are eaten largely is shown by the case quoted of a poor factory girl who confessed to spending eighteen pence a week on them. Higher in the social scale lozenges containing drugs, either of a stimulating or sedative nature, are eaten. Sir James Crichton-Browne believes that such sweets are largely consumed for their intoxicating properties by women, shop girls and errand boys, and even school-children. The drug habit once acquired is most difficult to give up, and no words are needed to emphasize the fact that it is a most subtle one, and most pernicious in its effects. One of the least of these is that when seriously ill, the drugs prescribed by the physician fail of their intended effect because the system is so used to them they do not cause the desired reaction, and the doctor has to increase the dose or substitute a more powerful re-agent.

Sooner or later—and sometimes even "unto the third and fourth generation"—man has to pay the penalty of transgression, whether in food and drink or clothing. But fortunately for those who properly desire to look their best—even as do the birds and flowers—it is not necessary to suffer to be beautiful. On the contrary, true beauty is the concomitant and result of health, of perfect harmony of function and surroundings, of perfect balance of body and mind. And it is undeniably woman's function and duty to be beautiful, for, conversely, true beauty is a sign of health, and health is the greatest gift of the gods, and the grandest heirloom to hand on to one's children. Even from the mental and moral point of view, health is greatly

to be prized, for no one can habitually think evil thoughts or lead an evil life and yet be healthy. And after all, the highest beauty is that which comes from a beautiful spirit irradiating and expressing itself through a beautiful body.

—*The Queen.*

Smithsonian Institution—Hodgkins Fund Prize.

The Hodgkins Fund Prize of $1,500 is offered by the Smithsonian Institution, Washington, D.C., in accordance with the following announcement: In October, 1891, Thomas George Hodgkins, Esq., of Setauket, New York, made a donation to the Smithsonian Institution, the income from a part of which was to be devoted to "the increase and diffusion of more exact knowledge in regard to the nature and properties of atmospheric air in connection with the welfare of man."

In the furtherance of the donor's wishes, the Smithsonian Institution has from time to time offered prizes, awarded medals, made grants for investigations, and issued publications.

In connection with the approaching International Congress on Tuberculosis, which will be held in Washington, September 21 to October 12, 1908, a prize of $1,500.00 is offered for the best treatise that may be submitted to that Congress "On the Relation of Atmospheric Air to Tuberculosis."

The treatise may be written in English, French, German, Spanish or Italian. They will be examined and the prize awarded by a committee appointed by the Secretary of the Smithsonian Institution in conjunction with the officers of the International Congress on Tuberculosis.

The right is reserved to award no prize if in the judgment of the committee no contribution is offered of sufficient merit to warrant such action.

The Smithsonian Institution reserves the right to publish the treatise to which the prize is awarded.

Further information, if desired by persons intending to become competitors, will be furnished on application.

CHARLES D. WALCOTT,
Secretary, Smithsonian Institution.

Washington, February 3, 1908.

Dr. Leander Starr Jameson, Premier of Cape Colony from 1904-1908, has resigned. He was born in Edinburgh in 1854, and is a graduate of the University of London. He organized the famous Jameson raid against the Boers in the Transvaal. For this he was tried in London and sentenced to ten months' imprisonment, of which he served one.

The Oldest Drama.

"It fell on a day, that he went out to his father to the reapers. And he said to his father, My head, my head. And he said to a lad, Carry him to his mother. And . . . he sat on her knees till noon, and then died. And she went up, and laid him on the bed . . . and shut the door upon him, and went out."

Immortal story that no mother's heart
  Ev'n yet can read, nor feel the biting pain
That rent her soul! Immortal not by art
  Which makes a long-past sorrow sting again

Like grief of yesterday; but since it said
  In simplest word the truth which all may see,
Where any mother sobs above her dead,
  And plays anew the silent tragedy.

JOHN MCCRAE, in *The University Magazine.*

Varicose Ulcers.

The following has been used with great success in cases of varicose ulcers: The patient is put to bed for two or three days, then the leg is shaved and scrubbed and zinc oxide powder applied; if ulcer is large, put an extra layer of the powder and gauze over it; then paint leg with the following: White gelatine, 150 parts; zinc oxide, pulv., 150 parts; glycerine, 250 parts; distilled water, 450 parts; and apply bandage, then the paint again until there are three layers of paint and two of bandage. Take temperature, and if it is normal do not disturb for two or three weeks. This splint is found to be most comfortable (and to far surpass any elastic stocking), and the patient may go around his ordinary work without its being injurious, as long as there is no temperature.—*The Canadian Nurse.*

The Borderland of Disease.

There is a growing tendency on the part of medical men to recognize the pathological importance of certain, at present, little understood conditions of the blood. Some of these indeterminable deviations from the normal present none of the aspects of the anemias, but nevertheless bear a direct relation to increased susceptibility to bacterial infection. The studies of Wright on the opsonins, so called, are of special interest in this direction, inasmuch as they have in a measure converted many of our abstract theories into concrete facts. That certain constituents of the blood may be diminished without apparent decrease of the corpuscular elements or of the hemoglobin, is at last fairly well established, and while the specific properties of these constituents are not as yet definitely known, there is abundant reason for attributing certain phases of malnutrition, as

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Original Communications.

BIER TREATMENT—HYPEREMIA AS A THERAPEUTIC AGENT.*

By S. H. Westman, M.B., Toronto.

Junior Assistant Surgeon, Hospital for Sick Children; Junior Clinical Assistant in Surgery, Toronto General Hospital.

Von Bier has endeavored during the last sixteen years to imitate Nature's methods for the cure of certain diseases by the artificial production of hyperemia in the diseased area. In the introduction to his book, "Hyperæmia—Als Heilmittel," he states, "No reaction to foreign substances of any kind occurs without hyperemia, be that substance a crude foreign body or a minute bacterium, or strong chemical poison; therefore, I may assert: There is no lesion which the body tries to, and is capable of, removing or rendering harmless that produces anemia; it is always accompanied or surrounded by hyperemia." If we, therefore, accept the reactions of the body as useful efforts of nature, we must admit that hyperemia is the most widespread of all auto-curative agents. Now, if we observe how nature works, we learn that, while it produces in all important processes of the body a local hyperemia in the parts concerned, the same is produced as frequently by a slowing as by an acceleration of the blood current.

Differences of the utmost importance, physically as well as chemically, exist between the rapidly flowing stream of arterial blood and the sluggish one of more venous blood.

Von Bier employs two varieties of local hyperemia—venous, or passive, and arterial, or active.

* Read before the Academy of Medicine, Toronto.

Arterial, or active, hyperemia is that form of congestion which is produced by acceleration of the blood stream and by an increased quantity of blood in the part. This condition is brought about clinically by the application of heat, and the real curative factor in this form of hyperemia is evidently the accelerated blood stream.

Other agents besides heat have been used to produce this form of congestion, viz., massage and electricity, and they are probably efficacious because of the hyperemia which they produce.

Heat may be applied by means of the Tallerman's, Betz or Bier oven, or by means of any form of radiant heat apparatus, or by hot sand. The action of these agents not only produces hyperemia of the skin, but a congestion of the deeper parts, particularly of the limbs.

Klapp, an assistant of Bier, maintains that such hyperemia extends to the viscera. He put the abdomen of a rabbit in a hot air apparatus, exposed it for some time to intense heat, opened its abdominal cavity immediately on removal of the animal from the apparatus, and found a hyperemia of the entire abdominal wall, the peritoneum of the intestines and the central tendon of the diaphragm.

Other experiments have been performed, to show that active as well as passive hyperemia not only affects the superficial surfaces, but extends deeply, and involves the whole thickness of a limb, even to the blood vessels of bone.

The other variety of hyperemia—passive, or venous—is the greater curative agent, and is used largely in the treatment of acute and chronic infective inflammation of tendons, sheaths, bones and joints.

Venous congestion is produced artificially by two methods,—

(1) Martin's india rubber bandage.

(2) Vacuum chambers.

The india rubber bandage is used mainly in the production of passive hyperemia in the limb, and by means of this bandage, and depending upon the degree of constriction, one can produce any degree of stasis hyperemia, varying from the mildest to the most intense form.

The most useful degree of hyperemia is the moderate type.

In applying the bandage, care should be taken to see that it is applied above the diseased area, that the folds overlap, and that no other bandages or dressings are wound about the limb below it.

As a result of moderate constriction above the elbow, the subcutaneous veins of the back of the hand and flexor side of the

forearm become swollen, the skin of the arm assumes a bluish color, and the palmar and dorsal surfaces of the hand become rosy red. After three or four hours the skin of the forearm is equally bluish red, the subcutaneous veins less prominent, and a slight degree of edema is present. Friction now produces a bright arterial red color, which disappears in five or ten minutes.

After eight to twelve hours, the edema is much greater, and the arm colder.

If the bandage be applied with the proper degree of constriction, the patient should not experience any pain or inconvenience; the part should feel moderately warm, and the pulse should be felt beating on the distal side of the bandage.

The constriction is maintained for one hour daily, in tuberculosis, and for acute infective inflammation, from eight to twenty hours daily.

If the constriction be severe enough to cause pain in the limb, with decrease in temperature, absence of the peripheral pulse and the presence of vermilion spots, the bandage should be loosened or entirely removed.

To produce passive hyperemia of the shoulder-joint, a piece of padded rubber tubing is used instead of the broad bandage. It is wound around above the joint, and its ends secured above by a pair of forceps. The tubing is prevented from slipping by two straps, which are fastened to the band in front of and behind the shoulder. The straps are pulled taut, and the other ends are tied in the opposite axilla. For producing venous congestion in the hip, no practical method has yet been devised.

The other method of producing and maintaining passive hyperemia is by the agency of a glass vacuum chamber attached to an air-suction pump, or by a large or small cupping glass, the air of which is exhausted by the suction of a rubber bulb.

The limb is placed in the chamber, and the rubber cuff secured in place by a rubber bandage, wound lightly around the leg, so as to ensure an air-tight seclusion, without constriction stasis. The air is thinned by the aid of the suction pump, and kept so by pumping slowly or by turning the stop-cock. The congestion is prolonged for twenty minutes to one-half hour, and should never be intense enough to cause pain or discomfort. The external air pressure draws the limb and rubber cuff into the apparatus with considerable force, so that the patient must endeavor to withdraw the limb at each suction action of the piston, in order to prevent pressure of the limb against the sides or end of the chamber. As the air becomes rarefied the limb

swells, becomes bluish red, and the veins prominent, vermilion spots appear here and there on the skin, moisture collects upon the inside of the glass chamber, often obscuring the appearance of the limb.

Extreme thinning of the air produces hemorrhagic points in the skin, a sense of aching pain and weariness in the limb and a feeling as if the skin were about to burst.

A vigorous degree of hyperemia is produced by the cupping glass, which is used principally for the production of local hyperemia in small and limited inflamed and suppurating areas of the trunk and neck, situations in which the bandage is not applicable. As an agent for the production of hyperemia, its application is limited.

As a therapeutic agent, passive congestion is used in the treatment of acute inflammation and suppuration, mainly in the limbs. In these cases, if a limb be affected, the bandage is applied above the diseased area, so as to produce a slight or moderate degree of hyperemia.

The first striking effect of the constriction, provided that it is properly applied, is the relief of the pain. The limb becomes more swollen, looks more acutely inflamed, the swelling, redness and edema soon extending almost up to the bandage. This apparent change for the worse is rather alarming, and may induce the surgeon to remove the bandage. The constriction should be carefully watched, however, and maintained for about four to eight hours the first day. While the bandage is off, the limb should be bound with an ordinary bandage to relieve the edema caused by the congestion. During the second day, constriction is maintained for ten to fifteen hours, and finally, during the next day, to twenty hours out of twenty-four.

Under this treatment, pain is relieved, and although abscesses do form, they are quickly opened, the discharge soon becomes scanty, and suppuration rapidly disappears.

For the treatment of paronychia, acute inflammation or suppuration in tendon sheaths, gonorrheal or other forms of infective arthritis, etc., this treatment with the stasis bandage gives brilliant results.

In Professor Adami's article on inflammation, in "Keen's Surgery," he there calls attention to the fact that inflammation is a reaction on the part of nature to destroy the irritant or noxa existing in the organism.

"The increased amount of blood which nature determines to the part, and the redness, heat, swelling and pain, may not be the phenomena of excessive reaction, but of inadequate reaction;

the forces which the organism has been able to oppose to the irritant have been insufficient to neutralize it. And if local incision or excision be contraindicated, the rational treatment in such cases is not to seek to reduce the inflammatory manifestation, but, on the contrary, convinced that these in the main are beneficial, and are means whereby the organism antagonizes the poison, to promote and increase the same.'' Therefore, Von Bier increases the amount of blood to the part, not by poultices of linseed, sugar of lead, counter-irritants, but by the application of a rubber bandage, where possible.

The poulticing, hot applications and retention of heat in the part, employed by generations, served one end, viz., to determine more blood in the diseased area, and to bring the inflammation to a ''head,'' and as these agents produce a hyperemia of the deep as well as superficial parts, why not use instead, where possible, the Bier Stasis Bandage?

For the treatment of tuberculous affections of the bones and joints, Von Bier employs stasis hyperemia by means of the india rubber bandage, inducing a moderate degree of hyperemia for one hour daily, and continuing the treatment for six to nine months. Where abscesses form, they are opened with antiseptic precautions, and, where possible, the cupping glasses are applied to the sinuses for five minutes at a time, followed by five-minute intervals of rest. The whole ''cupping seance'' lasts three-quarters of an hour.

Where the tarsus or carpus is diseased, the patient is allowed to use the parts for light active movements, and passive movements are employed by the surgeon or friends.

Where the joints affected are large, and subject to pressure, such as the knee or ankle joint, some form of retentive apparatus is applied, and for the first few weeks the patient is kept in bed.

If operation be indicated for the deformity, evacuation of pus or removal of a loose sequestrum, they are employed, but, as a rule, Von Bier avoids too diligent probing, curetting or drainage of the tuberculous focus.

The degree of hyperemia employed is one which is somewhat more intense than the moderate grade described above. The bandage is applied to the limb, always above the disease, and to a different part of the arm or leg, alternately, to prevent the atrophy which inevitably results at the end of a few months from the constriction.

The passive movements employed by Bier, combined with

venous hyperemia, have given much more brilliant functional results than where complete fixation has been employed.

Contraindications to the employment of the Bier treatment in tuberculosis are:

Amyloid degeneration in the viscera.

Large abscesses, filling the whole articular cavity; much deformity of the joints and where the disease involves the hip.

For the treatment of disease of the tarsus and carpus, elbow and ankle joint, Bier's congestive methods have given splendid functional results.

He advocates the use of this treatment, not to the exclusion of other excellent methods, but as an aid to them, where it can be employed.

In conclusion, I should like to say that the application of hyperemia for the cure of gonorrheal joints, inflammation of tendon sheaths and tuberculosis of tarsus, carpus, elbow and ankle joints, have given functional results infinitely better than any other form of treatment.

For the past nine months, Bier's treatment has been employed in the Hospital for Sick Children upon a number of cases of tuberculous disease, and the results have been very encouraging.

The cases so treated have been tuberculous lesions of the hand and feet, mainly, and of the seven cases in which it has been applied, a complete cure has resulted in five, and great improvement in the remaining two. At present, the treatment is being employed in two cases of infective arthritis of knee and ankle joints, and for the cure of two other cases, one of which is a tuberculous elbow, the other, tuberculous disease of the wrist joint.

ETHICS AND DEPORTMENT OF THE PHYSICIAN AS A CITIZEN.

By John Hunter, M.B.

EVOLUTION OF THE MEDICAL CITIZEN.

What man's physical condition may have been, in those ages long since submerged in the oblivion of a bygone eternity, we cannot tell, but we know, that during many millenniums he has been very vulnerable to both disease and injury. He has paid a heavy toll for the privilege of existence. War, pestilence, famine, immorality and intemperance have prematurely filled countless myriads of graves. These malevolent sleuthhounds have persistently and mercilessly menaced his march through all the centuries that have passed away, and in some parts of the world, they are still in full pursuit of their victim with all their virulence.

Common enemies and mutual needs bring men together, in order that they may be the better able to protect themselves. The suffering and disability of sick and injured have always made a sympathetic appeal to the strong and healthy. The accumulation of medical knowledge, and of experience, evolved the necessity for the setting apart of a certain class to use this knowledge and experience in the relief of the sick and disabled; hence the evolution of the physician's calling. As civilization advanced, two needs became manifest: (1st) Educated physicians; (2nd) protection from ignorant impostors. The state enacted laws governing the practice of medicine, and bestowing upon physicians certain privileges. The fact that the state has bestowed these, places the medical citizen under certain obligations to society; hence his ethics and deportment.

These may be briefly considered under the following heads:

I. Ethical obligations as a citizen to remove the causes of disease.

II. Ethical obligations as a citizen to improve social conditions.

III. Deportment.

ETHICAL OBLIGATIONS AS A CITIZEN TO REMOVE THE CAUSES OF DISEASE.

The relationship of the individual physician to the individual patient, as medical attendant, does not come within the purview of this article, and therefore may be passed over unnoticed.

Citizenship in no other vocation calls for a keener appreciation of honor, and of honesty of purpose, than is involved in the ethical discharge of the duties of the medical citizen. The privileges bestowed on him are unique, and carry with them corresponding ethical responsibilities. Take, for example, the case of a contagious disease. When the physician has discharged his duty as a medical attendant, his ethical obligations as a medical citizen demand that he should use his technical knowledge to prevent the spread of the disease. His search for the presence or absence of infection in other members of the family, may require from these, not only the complete surrender of their persons to inspection, but also, a revelation of their habits may be called for, as well as an investigation of the sanitary conditions. These examinations demand on the part of the examiner not only cleanliness of hands and instruments, technical knowledge and skill, but also refinement of thought, and of deportment. For a physician to infect a fellow-citizen through carelessness or slovenly habits, or to act boorishly, would be an ethical abomination on his part.

Another factor in the causation of disease, especially of the digestive and nervous systems, is the morbid and indiscriminate use of drugs and nostrums by the laity. The ethical obligation of the medical citizen in regard to this evil is somewhat unique, for he himself may be a contributing factor to it. Does he not err in the importance he attaches to the use of drugs? Osler emphasizes the great importance of a physician being able to recognize the uselessness of most drugs in the treatment of disease. Prof. Dubois agrees with Prof. Sahli in saying that it is safer to be treated by a physician who gives only harmless remedies than by one who has too strong faith in the curative power of his drugs. Does the physician not often place too great importance on the part the medicine plays in the treatment of a disease? While he is writing a prescription if in the city, a messenger is hurriedly dressing to catch the first street car, or, if in the country, a horse is being hurriedly hitched up for him to get to the drug store for medicine. Many a valuable horse has been ruined in this needless rush. Were the writer a boy again at home on the farm, with the experience gathered from one-third of a century in practice, and from observation in European and in American hospitals, and sent on such an errand, he would be far more solicitous about the care of the horse, than he would be about the time required to get the prescription put up. Is not our conduct a contributing factor in fostering the drug-taking habit, so prevalent among the laity?

Is the physician not under any obligation to explain to the patient and to the laity, who are attending the sick, the natural history of the disease, the inestimable curative virtues in sunshine, pure air, nutritious food, sleep, and rest for both body and mind? To teach that drugs, used intelligently, may be very valuable helps, but that, used indiscriminately, they become very injurious to health? To point out the worthlessness of nostrums and the danger in using them?

A cursory glance through the chapters on etiology in some of the standard medical text-books of even a period no earlier than the first half of the past century—and many of these volumes, in excellence of diction and wealth of learning, are still the peers of any works in medical literature—is enough to show that a great evolution has taken place. Factors that were then given great prominence in the causation of disease have been relegated, in the light of bacteriological science, to the limbo of oblivion. The knowledge that all contagious diseases are due to the presence of pathological micro-organisms, the nature and propagation of which are established facts, places far greater obligations on the modern medical citizen than rested on his predecessors, who believed that the etiological factors in disease were to be found in auto-infection from morbid conditions arising from blood or tissue changes. The physician who confines his attention solely to the conditions affecting the individual who has a contagious disease, if not criminally, is certainly grossly indifferent to his ethical obligations, as a citizen, to society. The tart reply is sometimes heard, "Well, physicians are neither remunerated nor thanked for interesting themselves in preventive measures." This, if true, may be a reflection on the shortsightedness and ingratitude of the masses; but it does not touch the mission of medicine, viz., the prevention and healing of disease. The clergyman is under an imperative ethical obligation to proclaim the Gospel to the rich as well as to the poor; but the former are under just as imperative an ethical obligation to pay for any service rendered them. If a digression be permitted here, the writer has no hesitancy in stating that physicians have largely themselves to blame for the poor remuneration, and for the want of appreciation of their services. We place a very low estimate on the value of our services by the way in which too many of us rush after lodge practice and after every "beck and call" that may come our way. When we are prepared to place a proper value on medical services, the public will soon learn to appreciate them too.

Coming back to the subject of preventive measures, can it

not be said that the widespread prevalence and appalling mortality from tuberculosis cast a ghastly shadow far along the pathway of the medical citizen? He knows not only the cause of the disease, but also the measures needed to prevent its spread; yet where is the evidence of any great zeal that he has displayed in securing its prevention? The only sanitaria in our province were practically initiated by a layman. Can it not be truly said, to the disgrace of the medical profession, that, in the campaign against tuberculosis, it tacitly refused to accept the position of leadership? It must not be inferred from this statement that physicians stood idly by, for individually, and through medical associations, and in medical literature, splendid work has been done. But, nevertheless, it is ethically wrong for the medical citizen to leave the leadership in preventive medicine to the lay citizen. The physician, from his experience and investigations, knows better than the layman the amount of suffering and wretchedness associated with these diseases, and how much of this is preventable. Therefore, in the work of prevention, no matter who helps to carry on the campaign, the medical citizen is ethically bound to assume the full responsibility of leadership.

It is not only in regard to the prevention of contagious diseases that the medical citizen is ethically bound to occupy the regal throne of leadership, but on all questions pertaining to sanitary matters his technical knowledge enables him to speak with authority. This opens up a vast field, but space will only permit a reference to a feature or two, e. g., the site, construction, heating, lighting and ventilation of homes, institutions, factories, etc., transportation, immigration, hours of labor, child labor, character of amusements, in brief, every question pertaining to the physical well-being of the citizen, of society, and of the nation. In the prosecution of great public works, such as the Suez and Panama canals, the technical knowledge of the medical citizen makes him the peer of the great engineer who designs and carries out the work.

It may be said that, with conditions as they are in our complex environments, and with humanity as it is, it is not only a herculean task to attempt to remove all noxious influences from our physical life, but one utterly impossible of accomplishment. However, it is a thousand times better to fail in attempting to do our duty than to be apathetic about it.

> "If it is right, there is no other way;
> Brave words to speak, and braver still to live."

ETHICAL OBLIGATIONS AS A CITIZEN TO IMPROVE SOCIAL CONDITIONS.

However grave physical suffering and disability may be, they are of much less importance than the evils resulting from moral and intellectual degradation. No vocation in life has so close a connection with the moral and intellectual conditions as the calling of the medical citizen. He finds the zone of moral and intellectual destitution even more extensive than do either the clergy or courts of justice. He comes in contact with this form of destitution in every grade of society from the haunts of squalid misery all the way up to those "clothed in purple and fine linen" and dwelling in the mansions of the rich and aristocratic.

The ethical obligations of the medical citizen call for the use of his technical knowledge and experience to help individuals, society and the state to elevate moral and intellectual conditions, and, on the other hand, help to stamp out any vices and customs that are detrimental to these. The abortionist, the most cowardly and vilest of all murderers, should have no mercy shown him. He is a degenerate medical parasite and should be sternly exterminated. The physician who treats a young man for venereal disease without making any reference to the moral destitution associated with impurity fails to discharge his ethical obligations as a medical citizen. If the patient is not warned of the danger and degradation associated with an immoral life, he will, in all probability, remain the victim of an overpowering passion. Impurity is not only demoralizing to the individual and debasing to society, but injurious to the state, as it begets a degenerate population. The medical citizen, on account of his technical knowledge, is under greater obligation than even any other citizen to aid in the preservation of purity of life. He must invariably follow the example of the "Great Physician," who touched impurity with matchless compassion, but told the sinner to "Sin no more." None know better than the physician the number of young people wrecked through ignorance about the sexual functions. These deluded creatures become the prey of the avaricious charlatans. Every boy and girl, on arriving at puberty, should be taught the facts pertaining to the functions of the generative system. It is ignorance and not knowledge that is to be dreaded in this matter, and it is the medical citizen who should impart this knowledge in our schools.

Intimately associated with the vice of impurity is the vice of intemperance. The latter, as the former, affects all grades of society. Here again the medical citizen's knowledge places him

under special ethical obligations. Simply to procure the relief of his patient from the effects of a drunken "bout" is only to do one part of what is required of the physician. The other, and far more important, part of his work is to give his patient such advice as may enable him to acquire a sufficiently strong will to overcome his craving appetite for intoxicating beverages.

The somewhat unique duties of the medical citizen place him under ethical obligations regarding matters pertaining to religion, education and legislation. His technical knowledge has nothing to do with mere creed distinctions, but it has to do with the spiritual welfare of his patients. Knowing the character of the illness the physician is under ethical obligations to see that his patient receives all the consolation and help religion can render. Who of us have not suffered from "pangs of conscience" when patients have died suddenly, without, so far as we knew, any thought about the needs of the souls that passed on into eternity? Are we strictly ethical when we concentrate all our attention on trying to save the body, without giving any consideration to the needs of the immortal soul? Each reader must satisfy his own conscience on this matter.

On many questions pertaining to education the advice of the medical citizen may be of great value. He, rather than the teacher, is the better fitted to judge the amount and character of work the child should have. He should note any complaint parents make in regard to the progress their children are making at school. How often teachers are blamed unjustly for the backwardness of children, when a physical examination by the physician would quickly reveal the cause. Thousands of children have had their education impaired through inattention on the part of the family physician. He should see if any child in the family is deaf, has impaired sight, or is a mouth breather, and insist on any such being properly treated. Many children are rendered indolent, irritable and incorrigible through these physical defects. Very pronounced mental and moral changes for the better may follow the removal of adenoids and enlarged tonsils. The physician may confer a great boon on both child and parent by indicating the calling the former is best adapted for.

The ethical obligations of the medical citizen as to legislation are based on the character of his knowledge. He is the special custodian of much information essential to the needs of the state. The medical inspection of immigrants, the care of the inmates in such public institutions as asylums, sanatoria, hospitals, etc., would be most imperfect without the aid of the medical citizen.

In passing from this phase of the subject it can be truly stated that the ethical obligations of the medical citizen are many and onerous, but the following quotation contains enough inspiration to lighten the burden: "The pure joy of achievement, the calm pleasure that comes with the consciousness of a worthy task nobly done, is—if not reward enough for any man—certainly reward enough for any member of that profession whose proudest distinction is that it puts the welfare of all so high above individual profit."

DEPORTMENT.

Medical history shows that the medical citizen is just as much influenced by his environments as those in other callings are. Lingering traces may even yet be seen of the customs and prejudices of bygone days. The coachman, dressed in livery, is a relic of a custom prevalent in semi-barbaric or non-Christian ages, when people were divided into two classes, masters and slaves, or masters and servants. The influence of Christianity in teaching the brotherhood of man is bringing into disrepute all customs that place the badge of servitude on a fellow-being. Many ladies now, on going abroad with a nurse, have her dresses made by their own dressmaker, so that, outside the privacy of the bedroom, she is treated as one of the party of tourists. To-day, most physicians prefer to drive themselves. If they require the services of a groom, they allow him to dress as he pleases. In some cases without the livery, it might be hard for the public to know "who was who."

A century or two ago the physician's dress was quite an important factor in his make-up. In a picture, "The First Meeting of the Medical Society of London, 1773," the well-powdered wig, silk coat, knee breeches, large ruffles, etc., make quite an æsthetic costume. The hurry, flurry and worry of life in the latter half of the past century, and so far in this one, seem to have taken away from the medical citizen much of the æsthetic taste in dress, and of the courtly deportment so very noticeable a century ago. The modern physician has adopted the dress and mannerisms of the business man. In politics he is just as partisan as his fellows, and in municipal and educational affairs, he has as many "pet hobbies" as other men have. While the medical citizen holds his views as strongly as any others do, yet he learns from his daily contact with the sick and disabled to be somewhat more tolerant toward conflicting opinions than laymen are. To sum up the most characteristic traits in his deportment, it can be said that he is self-reliant, industrious, sympathetic and sociable.

HYPERTHYROIDISM.*

By Dr. Brefney O'Reilly, Toronto.

Mr. Chairman and Gentlemen,—

The case which I have the honor to present to you this evening is one representative of a type which I think, has, up to the present, hardly received the attention which is its due. Its frequent occurrence and the difficulties encountered in both diagnosis and treatment are my excuses for bringing it to your notice, in the hope that, in the discussion, light may be thrown on the subject by some of the senior members present.

Gertrude B., age 20, unmarried, factory worker; patient in St. Michael's Hospital.

Complaint.—Feeling of dizziness, "nervousness," weakness, palpitation of the heart and vertical cephalalgia. Duration of present attack about a month.

Family History.—Father dead, age 40—consumption. Mother living and well, age 55. Three brothers, living and well. Two sisters living; one has lung trouble. Father had two brothers and one sister who died of T. B. Mother had one sister who died of T. B.

Personal History.—Patient was born in Canada, lived on a farm and worked hard. As a child, had measles, whooping-cough, chicken pox and scarlet fever. When 13, had rheumatism and was in bed for two months (only in the ankles, had smothering spells, and says she had "rheumatism of the heart"). At 15, had pleurisy. Patient says her sanitary surroundings have always been good. She went to school till she was 14. Lately, her occupation has not been difficult. It consists in packing yeast; works 9 hours a day, all noon hour, and takes no lunch.

Present.—In June of 1905, while raking up the yard one hot, sunny day, patient became faint and sick, and had to remain in bed for a few days. Some days later, when walking along the railway track, she stepped aside to avoid a passing train, and, missing her footing, rolled down a 20-foot embankment. She was unconscious for a short time, but later managed to reach her home; felt poorly for a few days, but otherwise experienced no ill effects.

On July 2, 1905, had her first convulsive attack, after sitting in the sun all afternoon at the races. That evening, while at the hotel, she fell forward on her face, but did not lose conscious-

* Presented at the February meeting of the Medical Section of the Academy of Medicine, Toronto.

ness. She was in bed four weeks after this seizure, during which time she had several similar attacks. In September, took to bed again; this time her convulsions were worse and venesection was done.

In all these seizures she would have spells of dizziness and a feeling of weakness; the heart would beat very rapidly; she would stiffen out and be unable to speak. The patient never became unconscious, and could always tell when an attack was coming on.

In the attack, after the stiff feeling appeared, she would experience generalized tremors, flushing of the face, and a stiffening of the eyelids, and an aching spastic contraction of the wrists and fingers (somewhat resembling tetany, and not appearing in the feet).

After the seizure, would lie down. She never bit her tongue or passed urine. She says she frequently frothed at the mouth. Attacks would follow each other rapidly, and be accompanied by weeping. The whole seizure would last probably half an hour. Has also had frequent attacks of hiccough.

On December 15, 1905, was admitted to the T. G. H. While there she had several seizures. She also developed complete right-sided hemianesthesia; was insensible to painful sensations, to heat, cold and touch; conjunctiva not involved; also had an attack of severe pain in the left ear, and neuralgia in the left side of the face, and at this time first noted deafness. No cataleptic attacks.

On January 19, 1906, developed an attack of appendicitis. This became better, patient's nervous symptoms improved, and she was discharged from the T. G. H. on February 28th.

In July, 1906, entered the T. G. H.; was operated on for appendicitis on September 10, and was discharged from the hospital in October.

Patient felt well till about Christmas, 1907, when, one morning while at work, she noticed that her hands were trembling, her lips quivering, and later becoming stiff. Her heart beat rapidly, and she had to lie down for about an hour. After resting she felt better, but had a severe headache. She went home for two weeks, recovered, and then returned to work. Shortly afterwards she had another attack, which was very severe, and similar to those above described. She then developed influenza and was in bed for some days. A week ago started back to work, and had the same sort of seizures—hands shook, body would ache and the face would flush. There was spastic contraction of the fingers, lasting for about 15 minutes; the eyelids seemed also to become stiff.

Patient was admitted to St. Michael's Hospital, February 3, 1908.

Present Condition.—Patient appears well nourished; lies comfortably in bed in any position, and answers questions readily. The eyes are bright and clear. There is marked flushing on the right side of the face and a slight pallor around the nose and mouth. The mucous membranes are good in color.

A. Circulatory System—Inspection.—Paroxysmal flushing of the face, especially in the right side; marked throbbing of carotids, and a suggestion of venous and capillary pulsations. A distinct, irregularly distributed, bright red, mottled, erythematous rash, closely resembling measles, may frequently be seen on uncovering the thorax and abdomen. This disappears completely in from two to three minutes. Tache cerebrale is marked, and no patches of cutaneous edema have been noticed. Hands are slightly cyanotic, cold, clammy, and palms perspire readily.

Palpitation.—Pulse irregular as to time, varies from 54—140, regular in rhythm, force of successive beats of apparently moderate tension, but has shown 150 in Hg. pressure; artery wall not palpable, volume rather small. Is marked throbbing of the abdominal aorta. Apex beat normal in position and in force. Sphygmographic tracing made and attached to history.

Percussion.—No alteration in cardiac outlines.

Auscultation.—No bruits over præcordia.

Subjective Sensations.—Flushing of face, throbbing of abdominal aorta, palpitation, vertigo, and occasionally slight dyspnea.

Had an attack of epistaxis two years ago, and several times "spit up" blood (without emesis, nausea or cough) of bright color. Complains of attacks of generalized flushing, followed by sweating at times. No tinnitus aurium.

Blood.—R.B.C. 4,192,000; W.B.C. 8,800, H.C. 75 per cent.; differential count, P.M.N.L. 50 per cent., S.M.N. 16 per cent., L.M.N. & T. 2 per cent., E. 2 per cent.

B. Respiratory—Objective.—Inspection reveals nothing abnormal, no diminution of chest expansion. Palpation, percussion and auscultation nil. Subjective sensations—Attacks of dyspnea, with rapid respirations, running up to 40 per minute, noticed when excited.

C. Gastro-Intestinal.—Nothing abnormal; no attacks of diarrhea or emesis; no tremor of the tongue; no emaciation.

D. Genito-Urinary.—Urine normal; no albumen or sugar. Lately missed occasional menstrual periods. She began to men-

struate at 11. Periods have always been regular but sometimes painful and accompanied by emesis. Patient says that just before the onset she has pains in the right lower part of the abdomen. Has had only four periods since last May. Thinks the first delay was due to catching cold.

E. NERVOUS.—(1) Fine involuntary tremor of fingers. (2) Generalized muscular tremors, especially hands and angles of the mouth, even when alone, she says. (3) Muscular, touch, pain and thermal sensations normal at present. (4) Subjective sensations—Nervousness, irritability, depression, fits of crying and slight insomnia. (5) Cranial nerves.

> I., II., III., IV., V., VI., VII., IX., XI., XII., normal. VIII., R. normal; L., apparently nerve deafness. X., tachycardia.

(6) Reflexes—Normal beyond slight exaggeration of knee jerks. Babinski's sign and ankle clonus absent. (7) No globus hystericus, clavus, alteration in speech or mental deterioration. (8) No attacks of true tetany. The electrical excitability not tested.

F. CUTANEOUS.—Small pigmented patch 1-3x1-2 inch area below ramus of R. lower jaw. No leucoderma, pruritus or patches of edema; marked dermographia. See description of erythema under A section.

G. GLANDULAR.—No lymphatic enlargement; liver and spleen normal; thyroid not palpable. Slight muffling of percussion note over manubrium sterni. (Note possibility of persistance of the thymus gland or an abnormally placed thyroid.)

H. SPECIAL ORGANS.—I. *Eye.*—No abnormalities of optic nerve or external muscles of globe. R. eyelid at times shows slight ptosis. Graefe's, Stellwag's, Joffray's and Moehbiv's signs absent. Slight prominence of both eyeballs. Pupils equal and moderately contracted. No hippus. No nystagmus. Vision good at present. When 13, had difficulty in reading; wore glasses for two years, with good results. No edema of the eyelids. Complains of stiffening of the lids during attacks.

II. *Ear.*—Absolute deafness, apparently in L. ear, two years' standing. No definite history of otitis. Said to have had an attack of neuralgia when in T. G. H. Otherwise normal.

From the facts elicited in the history which I have just read, we recognize, on the one hand, a decided neurotic tendency, with conspicuous physical tendencies, a curious symptom-complex, embracing both neurasthenic and hysterical manifestations, as evidenced especially in the vasomotor disturbances, hemi-

anesthesia and the convulsive seizures. On the other, we find tachycardia, a fine tremor, suggestive of proptosis and some of the vascular phenomena peculiar to exophthalmic goitre, minus in this case, the thyroid enlargement, or if such be present it is either not of sufficient size to be distinctly palpable, or, as is occasionally found, an abnormally placed gland in the anterior mediastinum. Thus we find in the case under observation, one which is apparently on the border line between a simple neurosis and Graves' disease, and one to which the constitutional neuropathic or nervous theory can, I think, be fairly applied.

One is led by the study of cases such as these to be very chary in making a positive diagnosis, and to place more faith in the entire course of the disease than any one set of the symptoms, so many of which are common to both the diseases under discussion. In some cases one finds one or more of the cardinal signs of Graves' disease wanting, but there may be sufficient of the minor manifestations present to warrant a positive diagnosis. On the other side, cases are recorded showing certain of the positive signs of exophthalmic goitre, in which the neuro-psychical side is wanting, and the secretory and trophic anomalies permanently absent.

The literature at our disposal is meagre and vacillating, theories being advanced by one, only to be rejected by another. Perhaps in the term "hyperthyroidism" we find a partial solution of the problem. We all agree that exophthalmic goitre is accompanied by, and is probably due to, excessive thyroid secretion. Can we say the same of certain neuroses, taking the case presented to you to-night as an example?

52 College Street.

A CASE OF DEMENTIA PRAECOX, WITH CERTAIN UNUSUAL FEATURES.

By John Gerald FitzGerald,

Clinical Director; Pathologist, Toronto Asylum; Demonstrator in Psychiatry, University of Toronto.

Some of the difficulties encountered in making careful clinical observations in insane patients are well exemplified by the report of the following case. Often where it is most essential that the temperature, pulse, blood pressure and respiration be recorded at regular intervals the patient will resist every attempt made to secure the information, frequently causing sad gaps in the clinical history—a second point here exemplified.

A. C. M., No. 9889—was admitted to Toronto Asylum, April 6th, 1907. At this time he was 19 years of age.

Family History.—Father died at 80 years of age, cause not known. Mother living, age 50, mentally defective. No consanguinity between the parents. There were eleven children in the family, patient being the ninth. Six brothers living and well; all are day laborers. Five children died in infancy. We were unable to ascertain any history of other neuroses or psychoses in the family.

Personal History.—The patient was born in Belfast, Ireland, nineteen years ago. He attended school for a short time when a child. He was said to have been reticent and seclusive, and it was generally recognized that he was of a low type mentally. He had practically no outside interests, worked as a day laborer and never made any effort to better his condition. Patient came to Canada in April, 1905. On arriving in Toronto he obtained work as a laborer. His alcoholic history was slight, occasionally took a drink of whiskey. He also used tobacco in moderation. Sexual history was negative. He had no serious illness and no history of trauma was noted in his clinical record.

Present Illness.—The first incident noted by the patient's relatives in the early period of the psychosis was an outbreak of impulsive violence towards his mother; he was also abusive and threatening; all these things were foreign to the patient when well. During the next three months he worked irregularly, and there was considerable insomnia at times. In April he complained to his relatives that people had been running after him and were trying to harm him. At this time also he was vaguely grandiose and had active auditory and visual (?) hallucinations. His attention was weak, he became markedly apathetic and indifferent and was sent to the Asylum.

Mental Status on Admission—Patient's reaction indicated clearly that he was of a very low type mentally. His preliminary

knowledge and grasp of affairs in general was very slight. He answered questions promptly as a rule, but showed considerable emotional dulling, being very apathetic. There was no clouding of consciousness, and he was able to give a fairly good account of himself. He had active, auditory, fallacious sense perceptions, constantly heard people talking about him and making insulting remarks. Some vague persecutory delusions were elicited; they were fragmentary, varying in content, and quite unsystematized. Spontaneous attention was weak; voluntary attention was often difficult to obtain and could not be directed. Memory showed no gross impairment. He showed many mannerisms; at times also gave evidences of suggestibility, the symptom of echopraxia (the imitation on the part of the patient of any movement observed) being noted. Patient would often laugh in a silly way, showed no insight into his condition, and his judgment and critique were defective. The physical examination showed many stigmata of degeneration, a symmetrical head, face and ears being present. The palate was high and narrow, with a medium torus. Pupils were very large, about 6 m.m. in diameter, and irregular in outline. Heart was rapid and slightly irregular at times. The lungs were negative. Tendon reflexes were active. Fine tremors of the tongue and face were observed. His weight was one hundred and thirty-four pounds, which was about twenty-five pounds below normal.

From the time of his admission until early in June his condition remained much the same. His condition then became worse, he failed in weight, showed marked excitement, motor restlessness, reacted strongly to delusions of persecution which were present. About this time he broke a pane of glass and cut his wrist. He was destructive and was put in the prolonged bath. He continued to grow worse, refused nourishment, lost in weight and was greatly excited. The baths had only a slight sedative effect, and at times it was necessary to resort to other sedatives, because all hydro-therapeutic measures were found inadequate. On July 1st he was unusually restless and destructive, was in the prolonged bath at 98 degrees for twenty minutes, taken out and sent to bed. About half-past three in the afternoon his excitement was very marked and he had a general epileptiform convulsion; he showed signs of exhaustion. About four o'clock it was possible to take his temperature, and it was found to be 109.5 T. by rectum. Owing to the temperature being so high, two thermometers were used and more than one observation was made, but all confirmed the original one. Patient died at five o'clock that same afternoon.

It had been impossible to either take the patient's temperature

or observe his pulse for some time, so that we were completely in the dark as to how long the patient had been running a temperature. At the time of death there was no swelling of the body, no evidence of any local infection, and it was impossible to account for the great rise in temperature.

Permission for autopsy was not secured until twenty-two hours after death. By this time the body showed a most interesting condition—the neck and front and back of the chest were enormously distended, a crackling noise was elicited when the tissues were incised. The swollen parts of the body were of a bluish-black color. The abdomen was full and tense, and the intestines were filled with gas. Air escaped from both pleural cavities and from the pericardial cavity. The pericardium was red and injected, and grayish, fibrinous deposit covered the heart; there was a considerable quantity of blood-stained fluid in the pericardial cavity. The heart contained considerable quantity of blood mixed with air. The heart weighed 340 grams. The cavities of the right side of the heart showed some dilation; the mitral curtains were injected. The first part of the aorta was intensely injected, showed no atheroma, coronaries patent. Wall of the right heart was only about 3 or 4 c.m. in thickness. The heart muscle was soft and flabby.

The lungs were greatly congested, crepitant and on section a frothy red fluid exuded. Other organs showed congestion. The intestines were distended with gas. Otherwise the autopsy findings were negative. The weight of the brain was only 1170 grams.

It is greatly to be regretted that, owing to lack of bacteriologic material at the time, no cultures were taken. However, from the gross pathologic picture it seems highly probable that the organism present was the bacillus ærogenes capsulatus (Bacillus Welchii).

The possibility of the patient having infected himself with the organism at the time of his suicidal attempt would have to be kept in mind; and the presence of an acute endocarditis and pericarditis might have been associated with the presence of the organism in the blood stream. No local manifestation of emphysema was seen, however, until after the death of the patient, and this is a matter that has puzzled the writer. It is well known that the bacillus may wander into the circulation from the intestine just before or immediately after death (Muir and Ritchie), and such may have been the case with our patient.

I feel that no satisfactory conclusion can be drawn or any inferences safely made because of the gaps aforementioned. The case is reported simply recording the known facts.

Selected Articles.

THE PNEUMOCOCCUS INFECTIONS.*

By William Osler, M.D., F.R.S.,
Regius Professor of Medicine, Oxford University.

The pneumococcus infections alone among the maladies of modern life have increased in frequency and severity. The mortality from diphtheria has fallen in twenty-five years more than 75 per cent.; the death-rate from typhoid fever has fallen still more, and that of tuberculosis is steadily declining. Making due allowance for unavoidable errors in the figures, there can be no question of the enormous increase in the death-rate from the most important of the pneumococcus infections, *i.e.*, pneumonia, particularly in the United States. In some cities the mortality has increased fourfold. In this country, too, the death-rate has steadily increased during the last decennium, but not in the same startling ratio as in the large cities of the United States. In Chicago, for example, the mortality from pneumonia has reached as high as 20 per 10,000 of inhabitants, one-eighth of all the deaths being due to it—46 per cent. more than from all other contagious diseases combined. As the Registrar-General's report shows, it is in the cities that the great increase has taken place, and there are evidently conditions in our modern life favoring the spread of the infection. What these are is not easy to say, but they are conditions unassociated with drainage and water supply. While segregation of population has increased, the concentration has lessened, and household sanitation has everywhere improved. It is not easy to settle upon any one outside factor responsible for this remarkable change. It is a question worthy of the most careful study—all the more so because of its obscurity. In cities the element of frequent contact comes into play, in the school, in the street, in the tram-cars, etc. and in modern life this may be an important factor in the promotion of the spread of this special type of infection. Certain diseases, the plague, for example, have great waves of incidence, associated possibly with an increased virulence of the germ, and we may be upon the crest of a pneumococcic wave of such length that we lack the data for its measurement.

We are here face to face with a most serious situation in preventive medicine, one quite as deserving of organized study as

* Delivered before the Medical Society of London.

cancer or tuberculosis. The work of the past ten years has put us in a position to attack the problems with renewed vigor. There are still many lacunæ in our knowledge of the life-history of the pneumococcus. As is the case with so many germs, the more carefully they are studied the greater are found to be the variations, and we have learnt to recognize varieties in the species pneumococcus, which differ not only in their morphological characters but in degrees of virulence. The relation of these forms to one another and the relation of the whole group to the streptococci is being studied in many places. The work of the New York Pneumonia Commission has done much to clear up the relation of the typical and atypical forms, but it is a question of great difficulty which may take years for its solution.

One of the most interesting of the many transformations which bacteriology has made in clinical medicine has been the extension of our knowledge of the diseases caused by the pneumococcus. Inflammation of the lungs is only one, though the chief, among a score or more of important and serious diseases due to it. Unless it be the geno-coccus, no organism has risen so rapidly in the scale, and it may be called the David of bacteria, killing its tens of thousands to the thousands of any other.

Pneumococcic septicaemia is met with (1) in pneumonia. With the new methods of blood culture we have found that in a considerable proportion of all cases the blood swarms with the organisms. The toxæmia and many of the complications may be associated with this bacteriæmia, which, curiously enough, does not always disappear with the crisis; secondly, though rarely as a fatal septicæmia without recognizable local disease; thirdly, in the endocarditis and other local pneumococcic lesions: and, lastly, as a terminal infection in various chronic maladies. One of the first cases of this sort to come under my notice was a child with an acute tuberculous process at one apex. A sudden exacerbation of the fever with general œdema and coma, gave a picture somewhat suggestive of a tuberculous meningitis, but the autopsy showed an intense pneumococcal septicæmia.

Naturally affections of the respiratory passages take the first place in the group. As I shall state later, a majority of us carry about a potential infection. Catarrhal and suppurative affections of the upper air-passages are not infrequently caused by pneumococci. There has recently been described a remarkable epidemic of ophthalmia with catarrhal symptoms, caused by a closely allied organism, and the great importance of infection of the accessory sinuses has been dwelt upon by St. Clair Thomson and others. The meningitis arises, in some cases at least, from

this source. A bronchitis of singular chronicity may be associated with an infection of the tubes following a pneumonia. A girl, æt. 14 years, had pneumonia at the age of 10, a very severe and obstinate attack. For four years she had cough of a peculiarly irritating character, two or three spells in the day, in which she brought up a small quantity of viscid sputum. The history, of course, suggested a bronchiectasis. The physical examination was negative, save for the presence of a few piping rales at the bases of the lungs. The sputum in smears was as if taken from pure culture of most typical pneumococci.

Next to the tubercle bacillus, the pneumococcus plays the most important part in inflammations of the pleura. Acute fibrinous pleurisy and empyema are the chief forms, both the result of direct infection from the lung, either from a frank pneumonia or quite as often from small undiscoverable patches. The great increase in the frequency of empyema of late years has been noticed by some observers. In some of the large metropolitan hospitals, for example at Guy's, as described by Hale White, the cases have doubled in number in ten years. This has been attributed to the influence of influenza, but it has been just as marked in regions in which this disease has not been very prevalent. The special features of the pneumo-coccal empyema cannot here be discussed, but of all serious infections by this group of organisms, it is one with the lowest mortality when taken in hand early and properly treated.

The great respiratory infection, the most formidable acute disease of modern times, well called, in Bunyan's phrase, the "Captain of the Men of Death" is inflammation of the lungs, from the association with which the pneumococcus has had its most popular name. A few points only may be indicated for consideration: the causes of the undoubted increase of the disease; does a septicæmia precede the development of the local lesion as the investigations of Rosenow would suggest? the question of an increase in case mortality, the question of frequency and variety of clinically atypical forms; and lastly, how far are we in this generation treating the disease better than our fathers? I say our fathers, as I have no doubt about the lethal character of the treatment of our great-grandfathers.

Of cardiac affections due to the pneumococcus, the endocarditis, by far the most serious, is either associated with pneumonia or is met with as an independent disease; at least, we cannot always find a primary source. With anatomical features of its own, it is perhaps more often dextral than the endocardial lesion of any other organism, and in a high degree it shares with the

streptococcus forms the property of malignancy. Very few cases recover, and very many are overlooked clinically, as the cardiac features of the case may be completely masked in a profound toxæmia.

Peritonitis is the most fatal of the abdominal infections of this group. Much more common than statistics indicate, it has several peculiarities—a high mortality, a high incidence in childhood, a relative great frequency among female children, a tendency to localization and a stormy clinical course resembling that of the acute perforative peritonitis.

Pneumococcic meningitis, with many features of interest, comes third in order of frequency among the acute inflammations of the cerebro-spinal meninges. So far as I know, it is one of the few infections of this group, besides pneumonia, that occurs in epidemic form, and in very much the same way, in small house outbreaks of from three to five cases. As a complication of pneumonia it is not uncommon, occurring sometimes with the endocarditis. Isolated instances are met with in which no other lesion is found, and it is quite possible that the infection, as in the epidemic cerebro-spinal fever, may come through the nose or the accessory sinuses. In contrast to this latter form, it seems to be invariably fatal, at least that has been my experience.

Besides these chief affections of the respiratory, circulatory, gastro-intestinal, and cerebro-spinal systems, there is a large group of minor maladies due to the pneumococcus—abscesses, subcutaneous, muscular, periosteal, arthritic and certain cases of otitis media; some of these are of small account, others are the source of widespread and even fatal infection.

Source of Infection.—It has been known for many years that pneumococci exist in the mouth and throat of a certain number of healthy people. Indeed, Sternburg made his original observations on the production of mouse septicæmia by the injection of human saliva. The recent studies by the New York Pneumonia Commission have added greatly to our knowledge of this subject. Park and Williams examined 200 cases, chiefly normal individuals, and found pneumococci present in a large proportion of all, whether resident in the city or in the country. In fifty out of fifty-three cases of lobar pneumonia examined the organisms were present, and in the majority, of the typical virulent variety. It is interesting to know that a larger number of atypical strains were obtained from healthy persons than from patients with pneumonia. Longcope and Fox, of the same Commission, had 83 per cent. of positive results in forty-two individuals. One of the most interesting points in their observations

was the increase of the percentage of typical pneumococci in the mouth secretions during the months of December and January. In several instances the study of the saliva of the same individual between the months of November and April showed a remarkable change. The organism obtained in December was very virulent and killed mice, while in April the organisms were less virulent, so that they would produce no effect whatever. On the other hand, they found that some persons always had virulent pneumococci in their mouths. Buerger, at Mount Sinai Hospital, New York, reported to the same committee a study of seventy-eight persons, and the percentage of positive results was about fifty. The pneumococcus may appear suddenly in a normal mouth. The period of persistence was variable, but in some persons it was found with great regularity. Buerger made a study of the communicability of the organism from one person to another—so far as I know, the first attempt of the kind that has been made. The evidence was sought by demonstrating the absence of pneumococcus in the mouths of certain cases, and by studying the possible sources of subsequent infection. For this study two male wards, one containing twenty-four and the other twelve beds, and a medical children's ward were selected. The number of positive cases present in the small ward at any given time was rapidly ascertained. It was repeatedly found that normal individuals—that is, those in whose mouths the pneumococcus was repeatedly found to be absent—acquired the organism by association with cases of pneumonia or with positive, normal persons. To take an example, the patient in Bed 1 was examined on December 4th and 10th and found negative. On that day to the next bed a patient with lobar pneumonia was admitted, in whose mouth virulent organisms were repeatedly demonstrated. Five days later, and on a number of days subsequent, the pneumococci were detected in the mouth of the adjoining patient.

Buerger brings forward evidence to show that handkerchiefs and "positive normal" cases may be regarded as means of transportation of the pneumococcus from one person to another. A point of some moment brought out in a paper by him in the same series was the appearance and existence in two cases of pneumococci in the mouths, coincident with the development and course of ordinary colds.

It has long been known that the viability of pneumococcus was not very great, though it depends largely upon how the sputum is treated. In a study made of the whole question for the New York Commission, Wood found that in most sputum kept in a dark room the average life of the pneumococcus was eleven days,

but if exposed to direct sunlight, and if it dries and is desiccated, they rapidly die. He found that persons suffering from pneumococcus infections, in coughing, sneezing, expectorating. or talking, expelled from the mouth particles of sputum or saliva which contained pneumococci and which might remain suspended in the air for a number of hours if the ventilation of a room was not good. They become harmless in a very short time, one and a half hours being the limit.

The upshot of this, and of other work, is to show the exceedingly wide prevalence of pneumococcus, and that the great majority of healthy individuals, particularly in the winter months, harbor pneumococci in the secretion of their mouths and throats. The way by which the pneumococcus reaches the lungs has not yet been fully determined. The common explanation is that when the resistance of an individual is weakened from any cause, the pneumococci present or inhaled reach the lungs and excite inflammation. In view of the recent researches on the modes of transmission of tubercle bacilli by Grober and others, the infection may pass through the lymphatics, and we know also that the plague bacillus reaches the lung trouble through the lymphatics of the neck and gives rise to a pneumonia. On the other hand, the work of Rosenow suggests the possibility of a hæmatogenous infection, as there may be a bacteriæmia before a local lesion in the lungs is detected. Altogether there is much work to be done yet on the paths of infection in pneumonia.

The two important facts which have been brought out are the widespread prevalence of the pneumococci in the mouths of apparently healthy individuals, and the extraordinary variability which the germs show in virulence. We know, too, that there are great variations in resistance of the different races of men to the pneumococci. The negro in my wards at the Johns Hopkins Hospital showed a death-rate from the disease nearly 50 per cent. above the white, and throughout the Southern States of America this somewhat remarkable susceptibility is manifest. A clinical experiment on a very large scale has been going on for several years in South Africa. Dr. Porter's study of the disease of the Chinese and Kaffirs in the Rand mines shows that, while the former have a susceptibility to pneumonia quite equal to that of the negroes in America, the Chinese show a resistance far above that of the whites, and there have been in South Africa epidemics of severe pneumococcus infection characterized by catarrh of the upper air-passages and gastro-intestinal disturbances, while pneumonic lesions were rare.

Wadsworth, in a series of most interesting experiments, pro-

duced for the first time, I believe, pneumonia in rabbits subjected to a certain degree of immunization. Then we know that individuals at different ages present different degrees of susceptibility. The newborn and the infant are resistant, the adult and the middle-aged are susceptible, and debilitating influences, as exposure, alcoholic habits, render persons susceptible. It may be a battle between the degree of resistance and the grade of virulence of the organism harbored. There are facts which indicate that the atypical strains produce lung lesions which differ in degree, at any rate, from the true lobar pneumonia. A score or more of questions of the most intense interest and of the greatest practical importance are raised by these recent studies upon this most formidable of all infections. One point of the greatest practical importance remains, viz.: Is it possible to remove the sources of danger from the secretions of so many healthy individuals? A complete disinfection of the mouth is impossible. A very careful study of the effect of different solutions on the vitality of the pneumococci in the mouth has been made by Wadsworth, who found that of all mouth disinfectants that which has alcohol as a basis is the most effective. He recommends an alcoholic solution of bicarbonate of soda and sodium chloride with the addition of glycerine, made as strong as the patient can stand. It is to be remembered that the pneumococci not only live in the saliva and the secretions of the mouth, but in the throat and in the crypts of the tonsils—regions which it is still more difficult to reach.—*The Clinical Journal.*

OPSONINS AND THE VALUE OF OPSONIC MEASUREMENTS IN GUIDING THE TREATMENT OF CHRONIC INFECTIONS BY BACTERIAL VACCINES.

By Charles Frederick Bolduan, M.D., New York,
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The early work of Nuttall and others on the bactericidal action of normal serum, and Pfeiffer's demonstration of the bacteriolysis of cholera and typhoid bacilli by immune sera in the absence of cells, formed the chief basis on which rested the *humoral theory,* which attributed the protection in such cases to the destructive action of the serum on the microbes. It was found, however, that cases of protection resulting from the use of immune serum occurred where no such bacteriolytic action could be demonstrated; infection with plague or streptococcus may be mentioned as examples. It is now pretty generally accepted that immunity in these cases is due largely to the *phagocytic* action of the leucocytes. As far back as 1858 Haeckel had observed that particles of indigo injected into the veins of certain molluses could shortly afterward be found in the blood cells of the animal. However, the significance of this and other observations was not appreciated until Metchnikoff[1] in 1883 called attention to their bearing on infection and immunity. The outcome of his investigations was the establishment of the well-known doctrine of *phagocytosis,* the principle of which is that the wandering cells of the animal organism, the leucocytes, possess the property of taking up, rendering inert, and digesting micro-organisms which they may encounter in the tissues. Metchnikoff believes that susceptibility to or immunity from infection is essentially a matter between the invading bacteria on the one hand and the leucocytes on the other. He realizes that the serum constituents play an important role, but this role consists in their *stimulating the leucocyte* to take up the bacteria.

Thus, if a highly virulent organism is injected into a susceptible animal, the leucocytes appear to be repelled, and to be unable to deal with the microbe, which multiplies and causes the death of the animal. If, however, the suitable immune serum is injected into the animal before inoculation, the phagocytes attack and devour the invading micro-organisms. Admitting that the phagocyte plays an important part in certain infections, the question must still be considered whether the immune serum has

acted on the injected microbes or on the phagocytes. Metchnikoff, we have seen, takes the latter view.

In 1903, A. E. Wright[2] called attention to certain substances present in serum which acted on bacteria and rendered them more easily taken up by the phagocytic cells. He called this substance *opsonin*, and showed that it is present in normal as well as immune sera. By means of absorption tests modelled after those of Ehrlich and Morgenroth, he showed that the opsonin has a specific affinity for the bacteria and none for the leucocytes. The opsonins for staphylococcus prepare only staphylococci for the leucocytes, those for tubercle bacilli only these bacteria, etc. As a result of his observations, Wright supposes that the phagocytes play only a passive role, which depends on the preliminary action of the opsonin.

Bacteriotropic substances.—Independently of Wright, though somewhat later, Neufeld and Rimpau[3], of Berlin, published experiments on the phagocytic effect of immune sera. They also found that in these sera there exists a substance which has no direct action on the phagocytes, but which can fix itself on the corresponding bacteria and so modify these that they are more readily devoured by the phagocytes. They call this constituent a "bacteriotropic substance." There is little doubt that this bacteriotropic substance and Wright's opsonin are identical. Certain differences in the effect of heat are probably to be explained by the differences in the quantities of these sensitizing substances in normal and immune sera.

Opsonins distinct antibodies.—It was natural to question whether these "opsonins" were really distinct from other antibodies, or whether they were perhaps identical with the immune body (or substance sensibilatrice). In a series of papers on this subject Hektoen[4] shows that the former is the case—opsonins are distinct substances. This is not only indicated by the results of absorption tests, but by the fact that, by immunization, a serum can in certain cases be obtained which is opsonic but not lytic, or, in other cases, one which is lytic but not opsonic. Similar experiments have differentiated opsonins from agglutinins.

Structure of opsonins.—Opsonins, like agglutinins and precipitins, appear to possess two groups, opsoniferous and haptophore. On heating an opsonic serum the former group is destroyed, but the haptophore group remains intact, as can be seen from suitable combining experiments. There is still considerable difference of opinion as to the degree of heat necessary to inactivate the opsonins. Once the opsoniferous group has been destroyed it is impossible to restore the opsonic action by the addi-

tion of a complementing substance. Hence the opsonins are to be regarded as receptors of the second order and similar in structure to the agglutins and precipitins.

The opsonic index.—In the study of these opsonins Wright developed the idea that they were highly important in combating a number of bacterial infections, such as staphylococcus and tubercle. His observations showed that inoculations of the corresponding bacteria produced marked changes in the opsonic contents of the infected individual, and that it was possible to estimate accurately the immunizing effect of such inoculations.

Technic.—Wright's technic of measuring the opsonic power is a slight modification of the Leishman[5] method, and is as follows: An emulsion of fresh human leucocytes is made by dropping twenty drops of blood from a finger prick in 20 cc. normal salt solution containing one per cent. sodium citrate. The mixture is centrifuged, the supernatant clear fluid removed, and the upper layers of the sedimented blood cells transferred by means of a fine pipette to 10 c.c. normal salt solution. After centrifuging this second mixture the supernatant fluid is pipetted off and the remaining suspension used for the opsonic tests. Such a "leucocyte emulsion," of course, contains an enormous number of red blood cells; the proportion of leucocytes, however, is greater than in the original blood.

One volume of this emulsion is mixed with one volume of the bacterial suspension to be tested and with one volume of the serum. This is best accomplished by means of a pipette whose end has been drawn out into a capillary tube several inches in length. With a mark made about three-quarters of an inch from the end it is easy to suck up one such volume of each of the fluids, allowing a small air bubble to intervene between each volume. All three are now expelled on a slide and thoroughly mixed by drawing back and forth into the pipette. The mixture is sucked into the pipette, the end sealed, and the whole put into the incubator at 37 degrees C. The identical test is made using a normal serum in place of the serum to be tested. Both tubes are allowed to incubate fifteen minutes and then examined by means of smear preparations on slides and spread and stained in the usual way. The degree of phagocytosis is then determined in each by counting a consecutive series of fifty lecocytes and finding the average number of bacteria ingested per leucocyte. This number for the serum to be tested is divided by the number obtained with the normal serum, and the result regarded as the *opsonic index* of the serum in question. The presence of a high opsonic index Wright regards as indicative of increased

resistance. He further states that the fluctuation of the opsonic index in normal healthy individuals is not more than from .8 to 1.2, and that an index below .8 is therefore almost diagnostic of the presence of an infection with the organism tested.

Application of the opsonic measurements.—At the present time Wright has correlated all his observations and built up a system of treating bacterial infections by means of active immunization controlled by opsonic measurements. The principles underlying his method may be briefly summarized as follows: In localized bacterial infections the infected body absorbs but small amounts of bacterial substances or antigens. In consequence of this, the amount of active immunity developed is but slight. Localized infections, therefore, tend to run a chronic course. The logical method of effecting a cure in these cases is to actively immunize the body with the invading organism. In a number of infections, notably those of staphylococcus, streptococcus, and tubercle, the degree of immunity is measured accurately by the opsonic index. Following an inoculation with the infecting bacteria (dead cultures in salt solution), there is first a drop in the opsonic index, the "negative phase," then, depending on the size of the dose and the reacting power of the individual, there comes a rise of the index, the "positive phase," or a continuation of the negative phase. The former is obtained with proper dosage; the latter with doses too large or too small. In estimating the size of the dose given, Wright counts the number of bacteria per cubic centimetre of emulsion injected. Thus in the case of localized staphylococcus infections the doses for adult humans range from 100 million to 500 million bacteria. In the case of streptococcus the doses are smaller, averaging about 50 to 100 million. The bacterial suspensions are heated to 60 degrees C. for twenty minutes, 0.5 per cent. carbolic acid is added, and tests are made to insure sterility. The time for inoculation is governed by the opsonic index. If the first inoculation has been properly gauged, there is a brief negative phase, followed by a positive phase of some days' duration. As this positive phase gradually drops, one gives another inoculation and watches the effect on the opsonic index. If the index drops markedly and rises but little, the dose has been too large. Or, if the negative phase is slight, and the positive phase slight and transitory, the dose has been too small. With proper dosage, the negative phases are small, and the opsonic index is kept fairly well above normal. Hand in hand with this goes on improvement in the clinical symptoms.

Wright and his pupils have published accounts of a large

number of cases successfully treated according to this method. The results are reported as especially good in cases of severe acne, multiple boils, lupus, tubercular glands, and bone tuberculosis.

In judging the value of Wright's method, we must bear clearly in mind that the essential feature of it is the *control by opsonic measurements;* treatment of bacterial infections by the inoculation of dead cultures has long been known.

The results obtained by most workers in this country fail to bear out Wright's claims for the method. Thus the author[6] finds that the variation in the opsonic indices of several normal persons is often considerable; that opsonic counts based on fifty leucocytes may occasionally vary by more than 50 per cent., and that it is therefore necessary to count from 150 to 200 leucocytes for each test; that duplicate, triplicate and more tests made of the same serum, at the same time and under identical conditions so far as one can tell, frequently give widely divergent results; that the opsonic index and the clinical course of the disease do not always run parallel. Cases may do very well and have the index remain low; other cases may do poorly with an increased opsonic index. It is to be noted, furthermore, that some of these variations in results are unavoidable, at least with the present technic.

The author feels that the treatment of chronic infections by means of bacterial vaccines should be on a more extensive scale. Even though the opsonic measurements fail to furnish a reliable guide in controlling this treatment, it may be found that the indications for this method can be arrived at empirically. There is no doubt that treatment by bacterial vaccines has proven very efficacious in a number of instances, and it only remains to determine the conditions in which it can be applied. Wright deserves great credit for again calling attention to the value of active immunization.—*International Journal of Surgery.*

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Progress of Medical Science.

MEDICINE.

IN CHARGE OF W. H. B. AIKINS, F. A. CLARKSON AND BREFNEY O'REILLY.

Dysentery.

The literature upon dysentery has been singularly devoid of clinical articles, and this is particularly true of the English literature. There have been scattering articles upon isolated cases, but most of these have been by Japanese and Indian writers. This is natural, for in their respective countries this disease is of much greater importance than here. There have been a number of laboratory articles upon the various forms of dysentery bacilli and the pseudodysentery bacillus, but nothing which yet yields other than interesting laboratory results.

Vaillard and Dopter, in the *Annals of the Pasteur Institute,* publish an additional report upon the clinical use of antidysenteric serum. Their first report, covering 96 cases, was noted in the last article in *Progressive Medicine.* To this number they now add 243 cases, partly under their own care and partly from other hospitals in France and elsewhere.

Of 200 cases treated in France, 101 were moderately severe, 55 grave, 19 very serious, and 25 regarded as moribund. Of this number, 10 died, including also the cases dying at the moment when the serum was injected. This gives the very low mortality of 2 per cent. The value of the serum, however, is shown not only by the lessened mortality, but also by the relief afforded the patients and the rapidity with which they recover. The abdominal pain is relieved in a few hours, the tenesmus lessens, the blood and then the mucus disappears from the stools, which become fecal. Cases of moderate severity recover in from 24 to 48 hours. Grave cases, having from 100 to 200 passages per day, do not recover so quickly, lasting four or five, up to ten or fifteen days.—*Progressive Medicine.*

Mental Fatigue in Children.

In this rapid age of overstimulation and overwork, even the children do not escape, but show the effects in various ways, both mental and physical. Particularly in the spring, one observes the results of overwork and overfatigue. In an additional article the fact is pointed out that chronic fatigue and

malnutrition of the cells of the central nervous system are apt to result from the prolonged activity of the winter, accompanied, as it is, by less fresh air, less sunlight and less outdoor exercise than during other seasons. Normal fatigue is shown in the school child by a weakening of attention and perception, loss of self-control, lessened work-rate, and lengthened time of reaction to all stimulus. Usually more or less painful feelings accompany all effort. Within normal limits no harm results from this fatigue. If work is continued, nature asserts herself and the child falls asleep.

Signs of overfatigue are a drawn expression of the angles of the mouth, wandering eyes, headaches, disturbed sleep, perhaps night terrors, and morning irritability. There may be emaciation, and perhaps hysteria or chorea. There is no concentration of attention, and memory is capricious; there is painful nervous tension and a sense of ill-being. Older children may become horribly dreamy, introspective, self-depreciative, and develop a "New England conscience." In actual practice, less serious phases of mental overfatigue are the ones usually met with. In infants, fretfulness, restless sleep, indigestion—all may result from being too much entertained, especially if overstimulated just before being put to bed at night. The father and the grandparents are apt to be the worst offenders in such cases. In children of kindergarten age, bad temper, fretfulness, and frequently enuresis are often due to the excitement and overstrain of the kindergarten, especially if the children are the youngest in their classes. In older children, anemia, headaches, morning languor, subnormal temperature, lack of ambition, and failure to gain in weight are signs that should call the physician's attention to the amount of school work being done, as compared to the amount of sleep, of fresh air, of rest, and of wholesome food, with time to eat it. With any child, if the fatigue of the day's work is not recovered from during the night's repose, too much work is being attempted for that child.—*Progressive Medicine*, March, 1908.

Treatment of Asthmatic Attacks.

E. von der Velden, in the *Aerztliche Verein zu Marburg*, discusses the treatment of asthmatic attacks. The impression prevails that in the majority of such attacks a spasm of the bronchial musculature is an important factor. This applies to the purely bronchial cases and not to those due to weakness of the left ventricle, more rarely the right ventricle.

The treatment of an asthmatic attack is directed not so much

toward the respiratory mucous membrane as toward this bronchial spasm. The drugs available are all the narcotics and the narcotic members of the antipyretic group and certain specific, spasmolytic remedies. The chief representatives of these are lobelia and atropine. Dixon and Brodie have recently again shown that the latter drug paralyzes the broncho-constrictor fibers of the vagus; the former, the peripheral endings of the pulmonary branches of the vagus.

The double salts of theobromine, particularly diuretin, are known to dilate the vessels and to correct spastic conditions of the smooth musculature of the vessels such as are seen frequently in arteriosclerosis and in non-organic vascular neuroses. It seemed but rational to try diuretin also in the spastic conditions of the bronchial musculature, which presumably are responsible for most cases of bronchial asthma. The authors' experience with this remedy has been so encouraging that they recommend a more extensive trial, though they have been able to observe only five cases during the last ten months.

Diuretin was employed both in the nervous and catarrhal form of asthma. At the onset of the attack 15 grn. was given per mouth dissolved in water; if there was no relief in ten to fifteen minutes, a second dose was given. It was only rarely necessary to give 45 grn. The attacks were always considerably diminished in intensity and in the majority of cases aborted. The remedy never failed in the authors' hands, though a colleague, who tried it at their suggestion in one case, did not see any effect. The drug does not lose its action; in one instance it was given daily for four weeks with the same favorable result. From what they know of diuretin, it is not, however, unlikely that the effect will eventually be less pronounced. It is not advisable to give small doses during the day. Disagreeable after-effects on the circulation, kidneys, or central nervous system did not come under observation, but are not impossible if these organs are pathologically altered. Sometimes the stomach does not tolerate the drug; in these cases rectal administration must be resorted to. The action of diuretin will be investigated experimentally. It has not yet been decided whether the bronchial musculature, their peripheral, nervous apparatus, or the vessels are affected, but from the authors' knowledge, the latter seem least likely to be involved.—*Muench. med. Woch.*, April 2, 1907.

OBSTETRICS AND GYNECOLOGY.

IN CHARGE OF ADAM H. WRIGHT, K. C. M'ILWRAITH, FRED. FENTON AND HELEN MACMURCHY.

Saving the Perinaeum.

We are indebted to Dr. McCabe, of Strathroy, the able Examiner in Obstetrics for the Ontario Medical Council, for the following answer which he received at the last examination from one of the candidates: "The most important point to bear in mind is to have the head come through in its smallest diameter. Therefore, keep it fully flexed until the occiput comes out well from under the pubes, then permit extension, which, however, should not be too rapid. It must not remain flexed too long, or extend too soon, because in either case we would get a larger diameter, stretching the perinæum. In other words, we want forced flexion at first, and forced extension afterwards."

We quite agree with Dr. McCabe that this is an excellent answer, and not in accord with the teaching of most obstetricians.

It will be a matter of considerable interest to a large proportion of our readers to learn that Dr. J. Algernon Temple, of Toronto, was the first to point out the evils of premature and undue extension of the head in forceps delivery.

A little more than 22 years ago he sent a communication on this subject to the *British Medical Journal*. From that article we quote as follows: "For many years I have been greatly disappointed with the means recommended for the prevention of laceration of the perinæum, and after a more careful study of the subject I came to the conclusion that the only method of any value was to prevent extension of the head from occurring, and to compel it to be born in a state of forced flexion.

"In primiparæ the vulvar orifice is small and resisting, and the occiput in its descent does not reach the pubic arch before extension commences. As a result of this extension the long occipito-frontal diameter, which measures about four inches and a half, is obliged to traverse the perinæum, to be followed by the fronto-mental, which measures about three and a half inches, making in all part of a circle about 8 or 9 inches in length. This naturally stretches the perinæum and the vulvar orifice to their utmost capacity, and it is during this time that rupture is apt to occur.

"To guard against this over-distension in cases where I fear laceration, after the head has reached the floor of the pelvis, and just previously to extension, I have been in the habit of applying a short forceps, and then, by carrying the handles backwards, I

flex the chin on the chest, while at the same time gentle traction is made downwards and backwards. In this way I delivered the occiput first, keeping the chin close to the chest. This brings the cervico-bregmatic diameter, which is but three inches and a half, through the vaginal orifice. This plan saves the perinæum one inch or more of distension. I have had the best results from this practice and have taught it to my class of students for the past three years."

It is very unfortunate that only a limited number of the profession learn properly the very valuable lesson thus taught by Dr. Temple. The writer believes that this is the most important suggestion he ever received during his professional career. He has for many years taught his class not to bring the occiput forward while the head is emerging—that is, not to extend the head too much when the chin cuts through the perinæum.

During the last couple of years some of the writers in the United States are following to a certain extent Dr. Temple's advice. One writer uses the words pretty much as they have been used by the student, and says, in a somewhat epigrammatic way, that we want first forced flexion followed by forced extension. We think it safer, however, to accept the description of Dr. Temple, and say nothing about forced extension, as the term forced extension is misleading and may do harm, as no "forcing" is required.

Caesarean Section.

Sir Wm. Sinclair, of Manchester, reported a Cæsarean section successfully performed for the fourth time on the same woman (*Journal of Obs. and Gyn. of Brit.*, Nov., 1907).

The patient was a IV-para, aged 34 years, extremely deformed. Labor had set in the previous night, the child was living, with the head above the brim of the pelvis. Abdominal incision was made along the centre of the old cicatrix, and as the dissection proceeded it was impossible to distinguish where the parietal structures ended and the uterine structures began. This permitted the whole operation to be completed without any apparent opening of the peritoneum. The wound in the uterus was closed with two series of silk sutures and with a few silk-worm-gut sutures which brought the skin together in the external wound. The wound was dressed in lint soaked in carbolic acid and glycerine.

The convalescence was without incident. The child was a female, weighing 8 1-2 pounds, and 18 inches in length.

Sir William strongly opposes sterilizing the patient, and agrees

with Wallace that "all Cæsarean sections should be performed with the view to ulterior pregnancy."

With regard to the time of operating, as a rule, there is no choice, as most patients come under observation in labor. The objections to the operation before the onset of labor that it predisposes to hemorrhage from improper contraction, and that without the dilatation of the os, drainage would be interfered with, are set aside as being absolutely groundless. The impression is that those operated on before the onset of labor have the smoothest convalescence.

He thinks that many of the fatal cases of repeated Cæsarean operation resulted from interference with adhesions which it would have been better to let alone.

The Treatment of Endometritis by Irrigation and Drainage.

Dr. Augustin H. Goelet, of New York, presented a paper with this title at the meeting of the Tri-State Medical Association of the Carolinas and Virginia, held at Charlotte, N.C., February 18-19th, 1908. He says: "The fundamental principle in the treatment of endometritis, in whatever form encountered, is drainage—drainage not only of the cavity of the endometrium, but of the submucous glands as well. In conjunction therewith, irrigation to free the surface of debris and agglutinated secretion, and thus assure cleanliness and free the orifices of the secreting gland ducts is essential."

He accomplishes this by means of a specially constructed double current uterine irrigator, small enough to permit introduction through the canal of the cervix without previous forcible dilatation. This is converted into an electrode by connecting it with the negative pole of the galvanic current, which is continued in force with 10 m. of current throughout the irrigation. Thus negative electrolysis is made use of to facilitate the introduction of the irrigator, and by relaxing the canal favors subsequent drainage. He maintains that the action of the current stimulates the glands to throw off pent-up secretion, and facilitates removal of tenacious mucus that may block the orifices of the glands.

He believes that the curette, though sometimes required, is used far too often and unnecessarily in this condition, and that when curettage is employed it is to be regarded only as the initial step of the treatment, subsequent irrigation and drainage being necessary to effect a cure.—*Medical Record.*

Editorials.

CRIME AMONG DOCTORS.

On the morning of March 18th, one driving or walking along the streets of Toronto had many opportunities of seeing large posters containing big headlines, the first and largest being "Crime Among the Doctors." One was able to ascertain from another part of the poster that he could get full particulars in *The Daily Globe* of the same date. On looking for such particulars, he could find a strenuous editorial on "Crime Among the Doctors." On considering the tone of the editorial and the methods of advertising it, one might possibly think that a yellow tinge was apt to appear, even in some of our best regulated newspapers. The editorial referred to has for introduction the following sentence: "The medical profession, as a profession, is on trial in Ontario to-day." We consider this a simple truism, which no grandiloquence or "tall-talking" of any speaker or writer can accentuate or depreciate. We shall extract certain portions of a public address, delivered by a professor of a Toronto medical college many years ago. We think the quotation represents fairly well the position taken by the majority of physicians to-day.

"Our profession has often been called a noble one. I sometimes think the expression is to a certain extent misleading, and have more than once expressed my opinions in that direction. From some points of view there is nothing essentially noble about it. I regret to say that we have in our ranks many who would cast huge blots on any standard of nobility we might assume.

"While I have refused to adopt the idea that there is any essential nobility in our profession, I have no desire to cast any slurs upon it. As a matter of fact, I place it second to none in the world, but I would like to impress upon you the fact that it will be exactly what we are pleased to make it. In conclusion, I have simply this to say: our profession is a great and noble one, in the sense that it gives us grand opportunities for good work in the interests of suffering humanity. If we, one and all, as students and practitioners, do our work honestly and conscien-

tiously, having regard to our duties to God and man, we will make our profession good, great, and noble, in the best sense of the words."

We do not happen to know any respectable member of the medical profession, who talks "in a superior and indignant tone about its dignity and unimpeachable honor." We think, in connection therewith that the following remark is singularly inappropriate: "But it remains shamefully true that, under the guise of that dignity, and protected by that honor of the profession, the most despicable crimes against morality are committed." Judging from these remarkable words, and the whole tone of the article, we should gather the impression that our profession is not now on trial, but has been tried, and *The Globe* is passing sentence on it.

The Medical Council is censured for not living up to its obligation in guarding the honor and good name of the medical profession. The statement is made that "it has the needed authority, under the Medical Act." It is presumed that the Council can act on evidence that is "morally damning," and strike the names of certain offenders off the roll of licensed practitioners. Unfortunately, this is not correct. The Council has no such power. It can take away a license only on evidence that will be deemed sufficient by the courts of law, to whom anyone dispossessed of his license can appeal.

It is stated that the names of disreputable physicians in Toronto are well known, and are "bandied about in the common gossip of the street." We believe that is true, but respectable doctors know less about these murderous acts than "the man on the street." So far as possible, all evidence is concealed from them by the guilty parties, their friends and associates. We quite agree with all the remarks which have appeared in *The Globe* and other newspapers as to the enormity of these crimes. We believe that the medical profession, the clerical profession, the press, and the police authorities should work together to suppress such crimes by dealing out adequate punishment to the criminals. Scolding, or lecturing, or belittling, or misrepresenting each other can do no good; on the contrary, each and all may do harm.

RACE SUICIDE.

There is on the staff of *The Toronto Mail and Empire* a deservedly popular writer, "Kit." Her columns in the Saturday issues are always bright and charming, and, better still, *uplifting*. In a recent issue (March 21), she spoke of the danger of Toronto becoming the "Canadian centre of race suicide." After referring briefly to "the poor girl in trouble," she goes on to speak of "married women trying, by every desperate means, to avoid motherhood—the best thing we women have, by the way." That sentence contains a world of truth, and touches on perhaps the most important aspect of the so-called race suicide. Kit happens to hold very high ideals as to that sweetest of all sweet things—motherhood. She has endeavored to teach the women of Canada their high and important duties in connection therewith. We admire her and honor her for her good work in that direction.

Well, now, Kit, let us have a little talk about Toronto. If you like us half as well as the writer likes you, it will be a friendly talk. You are clever, and a shrewd observer. You know and appreciate that noblest specimen of God's creation—a good woman. You know and sympathize with the woman who is weak, not because of badness, but simply from lack of strength. Let us again suggest that you have often uplifted her. You know something about the women of Toronto; you know something about the physicians of Toronto. Let us leave out of the question the poor heart-broken girl, who goes to the doctor's office with her fifty dollars. Let us consider the case of the married woman who wishes a physician to commit a crime.

Will you explain the following sentence in your article? "Some fashionable physician, living in a grand house, driving his motor, commits—every time he gets the price—a sordid murder, and goes scot-free." It happens that the number of fashionable physicians who drive motors, in Toronto, is somewhat limited; and, by a somewhat singular coincidence, most of those who would come under this category are supposed by those who ought to know them best to be very strongly opposed to such practices.

We have no great respect for the term fashionable, but we believe that, so far as Toronto is concerned, the fashionable physicians are respectable.

Now, a few words from our standpoint. With all our imperfections, we believe that the great majority of physicians in Toronto are respectable, as to abstinence from such crimes. We might say the same of the Province of Ontario, but, for the present, we desire to speak only of the city which you mention. A certain number of our physicians—let us say six—are supposed to be professional abortionists. They should be deprived of their licenses; but that is difficult to accomplish with the present legal machinery. They are, however, practically ostracized by the profession. No one of them can gain admission into any respectable medical society, such as the Toronto Academy of Medicine. This is not much punishment for them, but as to more drastic measures we are absolutely powerless.

In conclusion, Dear Kit, will you believe us when we say that the great majority of the physicians of our city are as much opposed to criminal practices as yourself. The writer of this article desires to repeat a statement, which he has often made in the past. It is probable that the two classes who are fighting most strenuously against the evils of race suicide in all civilized countries are practitioners of medicine and priests in the Roman Catholic Church. This, however, is the sort of work that "the man on the street" and certain press writers know but little about.

THE ONTARIO MEDICAL ASSOCIATION.

We are requested to remind our readers that the next meeting of the Ontario Medical Association will be held in Hamilton, May 26, 27, 28, under the presidency of Dr. Ingersoll Olmsted.

Much work has already been done by the Committee on Papers and Business, under the chairmanship of Dr. R. R. Wallace. As before announced, it is expected that Dr. Chas. S. Stockton of Buffalo will deliver the Address in Medicine, and Dr. Chas. L. Scudder, of Boston, the Address in Surgery. A provisional programme has already been distributed throughout the Province.

The Committee on Arrangements, under the chairmanship of Dr. A. B. Osborne, has nearly completed the work assigned to it. We are assured that the social side will be well looked after by our good friends of Hamilton. Arrangements have been made for a smoking concert at the Yacht Club, Hamilton Beach, on Tuesday evening, May 26th. On the following day the physicians of Hamilton will entertain the visiting members at a banquet in the Royal Hotel. There will also be a luncheon at the City Hospital after the morning session on Tuesday. The Committee asks us to announce that they especially request the visiting members to bring their wives and daughters, who will be happily cared for by the ladies of Hamilton.

We are also requested to announce that the golfers, yachtsmen and bowlers will be welcomed by the local clubs of Hamilton. The golfers are asked to bring their clubs, as the privileges of the Golf Club will be extended to all visitors through the courtesy of the President, Mr. J. J. Morrison, and his Committee. Similar privileges will be extended to the visitors by the Hamilton Thistle Club, through the courtesy of the President, Mr. Haslett, and the President of the Bowling Club, Dr. H. A. Wardell. Bowls will be supplied to the visitors by the members of the local club.

We believe we are justified in saying that the officers of the Association for this year are doing the best work, as to preparation for the coming meeting, that has been known in the history of the Association. We sincerely hope that this magnificent work will be duly understood and properly appreciated by the profession of Ontario. The next meeting should be the largest that the Association has ever had.

UNITY IN THE PROFESSION.

It would be a great blessing to our profession if its members could always work together. By doing so they would be more highly respected by the public, and would accomplish more good in every way. From the lower plane of a business standpoint, such unity is very desirable; or, in other words, *it would pay.*

A few weeks ago the writer visited a town of about 3,500 inhabitants, situated 100 miles from Toronto. There are six physicians practicing in the town. At one time there was a good deal of cutting and undercutting as to fees. It fortunately occurred to some of these doctors that it would be more sensible, and more satisfactory, to agree to stop this custom. As a consequence, all the physicians of the town met and decided on a fixed tariff, and signed a document pledging them to adhere rigidly to such tariff. The results have been exceedingly satisfactory in every way. In the first place adherence to the new rules adds something like 25 per cent. to their incomes, and, in the second place, the doctors are more highly respected by the public on account of more dignified methods of procedure under this new regime.

The saddest spectacle one can witness in this country is a small village having only two doctors, who are continually belittling and injuring each other.

The Medical Association of St. Catharines has set a good example to other cities by its recent action in regard to life insurance companies, to which we referred in a former issue. The life insurance companies were notified that after the 1st of July last the minimum fee for life insurance examinations would be $5. We understand that most of the leading companies of the United States and Canada have agreed to pay such fee. There can be no question that the members of the Medical Association of St. Catharines are right in their contention, and we believe that the time has passed when one or two disreputable practitioners can spoil such an agreement by the so-called undercutting. Large insurance companies have no great faith in cheap doctors.

The freedom of the city of London was bestowed upon Florence Nightingale, the organizer of nursing in the Crimean War. Sir Joseph Dimsdale, the City Chamberlain, in making the presentation, explained that the city regretted that, through the unexplained omission of a former generation, Miss Nightingale, who is now in her 87th year, had not been honored in this way half a century ago.

Amalgamation of Toronto Hospitals.

For some time we have heard rumors of the fact that an important amalgamation of two hospitals in Toronto was contemplated. We understand that a joint meeting of the Trust Boards of Grace and the Western Hospitals was held on Saturday, March 7th. The proposed union was very thoroughly discussed and was generally approved.

In case of amalgamation it is now supposed that new buildings for the purposes of the amalgamated hospitals will be erected on the grounds now occupied by the Western Hospital.

We believe there is almost a universal consensus of opinion that such a union would be advantageous to all parties, and would be in the interest of the general public residing in the very large district sometimes called Western Toronto.

The Sixteenth International Medical Congress.

The Sixteenth International Medical Congress will be held in Budapest, the capital of Hungary, under the patronage of His Imperial Majesty the King of Hungary (Emperor of Austria), from the 29th of August to the 4th of September (inclusive), 1909.

It will be the endeavor to establish a strong Canadian National Committee to represent Canadian Medicine at this Conference, and the Executive Committee of the Canadian Medical Association has reappointed Dr. W. H. B. Aikins, of Toronto, to act as Secretary of the Canadian National Committee. Dr. McPhedran, who was Chairman of the Canadian Committee for the International Medical Congress, held at Lisbon, 1906, will be associated in endeavoring to secure the formation of a strong and representative Committee. Any member of the profession in Canada desiring information may communicate with either Dr. A. McPhedran or Dr. Aikins.

Matters of interest pertaining to the Congress will be published from time to time.

The members of the Congress will be (*a*) certified doctors, who apply and have paid membership fees; (*b*) experts, having paid membership fees, with recommendations from the Canadian National Committee to the Executive Committee of the International Medical Congress, will be admitted as members. The membership fee is $5.00.

The following is taken from the advance announcement received from Budapest:

The Congress is divided into the following departments: Anatomy, Embryology, Histology, Physiology, General and Experimental Pathology, Microbology (Bacteriology), Pathological Anatomy, Therapeutics (Pharmacology, Physical Hygiene, Balneology), Internal Medicine, Chirurgery, Obstetrics and Gynecology, Ophthalmology, Diseases of Children, Diseases of the Nervous System, Psychiatrics, Dermatology and Syphilography, Aurology, Laryngology, Otology, Stomatology (Dental and Oral Surgery), Hygiene and Doctrine of Immunity, Juridical Medicine, Military and Naval Surgery, Navigation Medicine and Tropical Diseases.

By the 31st January, 1909, those who desire to present papers will have to hand the manuscript of their communications to the office of the Congress, and they will receive them in print, sent to their addresses, by the 31st July.

The corrections will be made by the Secretaryship. A legible hand is enjoined. The term for the announcement of optional subjects is fixed for the 30th April, 1909.

Members are permitted to co-operate in the departments of others, besides those of their own choice.

The office of the Congress, in its international intercourse, will avail itself of the French, German and English languages. At the festival and general sessions, the above-named languages may be used. In the departmental sittings, however, other languages are available: provided one of the members present communicates, within the time fixed for the duration of the festival, the purport of the lecture or discussion in one of the above-named languages.

The whole of the correspondence is to be directed to the office of the Congress. Office of the Sixteenth International Medical Congress, Budapest, VIII., Esterhazy-Utcza 7.

The term for forwarding applications with reference to the organization of the Congress expires on the 31st December, 1908.

The programme of social gatherings, and of making known railway favors, of accommodations, and of excursions, will be published by the 30th April, 1909.

International Congress on Tuberculosis.

As before announced, this Congress will be held in Washington, D.C., Sept. 21st to Oct. 12, 1908. The Central Committee has announced an offer of the following prizes:

1. A Prize of $1,000, for the best evidence of effective work in

the prevention or relief of tuberculosis by any voluntary association since the last International Congress, in 1905.

2. A Prize of $1,000, for the best exhibit of an existing Sanatorium for the treatment of curable cases of tuberculosis among the working classes.

3. A Prize of $1,000, for the best exhibit of a furnished house, designed in the interest of the crusade against tuberculosis.

4. A Prize of $1,000, for the best exhibit of a dispensary for the treatment of the tuberculous poor.

5. A Prize of $1,000, for the best exhibit of a hospital for the treatment of advanced pulmonary tuberculosis.

6. The Hodgkins Fund Prize of $1,500, offered by the Smithsonian Institution for the best treatise on the relation of atmospheric air to tuberculosis.

In addition, there will be a number of prizes of $100 each, for educational leaflets. In addition to these money prizes, a large number of gold medals, silver medals and diplomas will be presented for other contributions and exhibits.

Full particulars may be obtained from Dr. John S. Fulton, Secretary-General of the Congress, Washington, D.C.

It is not expected that work on the New General Hospital, Toronto, will be commenced during the year 1908.

Personals.

Dr. Samuel Moore has removed from Horning's Mills to Toronto Junction.

Dr. A. M. Rowles (Tor., '05) is engaged in post-graduate work in London, England.

Dr. Peter Reid (Tor., '07), formerly of Erin, Ont., is now practicing in Spokane, Wash.

Dr. J. M. Shaw (Tor., '88), who practiced in Keene, Ont., for a time, has removed to Regina, Sask.

Dr. B. A. Cohoe (Tor., '01) is now one of the assistants in Medicine in Johns Hopkins University.

Dr. George McDonagh, of Toronto, returned from the West Indies, and resumed practice March 18th.

Dr. D. C. Murray (Tor., '04) has removed from Atwood to Shelburne, where he is now practicing medicine.

Dr. Sam Johnston of Toronto, after spending a couple of weeks in London, England, went to Paris, February 28th.

Dr. J. T. Mullen and Mrs. Mullen, of Brampton, celebrated their golden wedding on March 4th in their home at Brampton.

Dr. W. J. Abbott (Tor., '01) is now practicing in Cleveland, O., and is devoting his attention entirely to the eye, ear, nose and throat.

We are requested to repeat our announcement that the Canadian Hospital Association will meet in the Parliament Buildings, Toronto, April 20-21.

Dr. E. G. Hodgson (Tor., '06) has returned from post-graduate work in Europe, and is now practicing in Toronto, his office being at the corner of Bay and Adelaide streets.

S. J. Meltzer, M.D., LL.D., head of the Department of Physiology and Pharmacology of the Rockefeller Institute for Medical Research, New York, will deliver a lecture on "The Nature of Shock," Tuesday, April 7th, before the Academy of Medicine, in the Library Building, Queen's Park, Toronto, at 8.30 p.m.

We learn from the *Montreal Medical Journal* that Dr. Jean Philippe Rottot has retired from the position of Dean of the Medical Faculty of the University of Laval. Dr. Rottot was born at L'Assomption in the year 1825, and commenced practice

in the year 1847. The *Journal* says: "Few men have had a more distinguished career in their profession than Dr. Rottot, and few have brought more honor than he upon their race and nationality.

We also learn from the *Montreal Medical Journal* that Dr. E. P. Lachapelle has been appointed Dean of the Medical Faculty of Laval, in the place of Dr. Rottot. Dr. Lachapelle's many friends and admirers in Toronto and other parts of Canada will be glad to hear that he has been thus honored. We certainly agree with our contemporary in its statement that no medical man of our generation in Quebec has devoted himself so disinterestedly for so long a period, or in so many different directions, to the promotion of the health and well-being of his fellows as has Dr. Lachapelle. To him more than to any other is due the establishment of the Provincial Board of Health, and over which he has presided for now close on twenty years, with a steady increase in the power and efficiency of the institution. Dr. Lachapelle was mainly instrumental in the building of Notre Dame Hospital, and in later years presided for some time over the College of Physicians and Surgeons of Quebec.

AFTER TWENTY YEARS.

Twenty years ago the following personals appeared in THE CANADIAN PRACTITIONER. We are glad to note that the gentlemen mentioned are still in evidence.

Dr. G. R. McDonagh has removed to 321 Church Street.

Dr. McKay, Woodstock, seconded the Address from the Throne.

Drs. W. W. Ogden and R. A. Pyne, of Toronto, have been re-elected to the Board of School Trustees.

Dr. Ball has removed to Sherbourne Street.

Dr. Cameron, Toronto, met with rather a serious accident on February 10th, when he was thrown from his sleigh and received injuries to the head, with concussion of the brain. He was confined to his house about two weeks, and under the influence of rest and quiet no unfavorable symptoms developed. He is still weak, but it is hoped that his recovery will soon be complete.

Dr. G. S. Ryerson leaves for Europe in May.

Dr. McKid, of Seaforth, is now in Vienna, Austria.

Dr. W. P. Caven, Toronto, has received the L.R.C.P., London.

Dr. J. E. Elliott has been appointed surgeon to the Toronto Field Battery.

Dr. Pepler has returned from England and commenced practice on College Street.

Drs. Grasset and Tesky were appointed to the staff of examiners for Victoria University.

Dr. Sam Cummings, Toronto, has received an appointment to Bellevue Hospital, New York.

Dr. A. H. Ferguson has been elected Professor of Surgery in Manitoba College, in place of Dr. Kerr.

We regret to learn Dr. J. D. Wilson, of London, has left that city for California, owing to failing health.

Obituary.

T. M. MILLER, M.D.

Dr. Miller, of Medford, Wis., died February 1st. He graduated from Trinity University in 1877, and practiced for some time in Keene, Ont. After leaving Keene he lived for a time in Jamaica, West India Islands.

VICTOR W. STEWART, M.D.

Dr. Stewart, who graduated from the University of Toronto in 1905, died at Denver, Col., February 10th.

WM. R. PRINGLE, M.D.

Dr. Pringle, C. P. R. doctor at Schreiber, died suddenly February 17th.

ARCH. H. ANDERSON, M.D.

Dr. Anderson, of Webbwood, died at his home, March 16th, aged 28. Deceased was a brother of Dr. Harry B. Anderson and

Dr. Duncan Anderson, of Toronto. He obtained his degree from Trinity, and was well known in military circles, having been at one time captain in the 35th Regiment of St. Thomas, and also a member of the first contingent to South Africa. He had been practicing in Webbwood for the last four years.

JOHN McMASTER, B.A., M.D.

Dr. McMaster, of 116 McCaul Street, Toronto, died February 20th, aged 49. The cause of death was septicemia, from which he suffered about six weeks. The original source of infection was apparently some disease of the naso-pharynx; the chief local manifestations were purulent collections, especially in the neighborhood of the psoas muscle. He suffered intense pain at times from neuritis. He graduated B.A. from Toronto University in 1886, and M.D. from Trinity University in 1894. He was for a time principal of the Technical School of Toronto. During the last few years he had charge of the X-ray Department in the Toronto General Hospital, and was also engaged in general practice.

Susanna Carson Moyes, M.D., who spent many years as a missionary in China, died in the General Hospital at Chatham, February 7th.

Miss McKellar, formerly Head Nurse of the Burnside Lying-in Hospital, of Toronto, died at Pueblo, Col., March 13th. The cause of death was said to be angina pectoris.

Book Reviews.

A Manual of Diseases of Nose, Throat and Ear. By E. B. Gleason, M.D., LL.D., Clinical Professor of Otology in the Medico-Chirurgical College; Aurist to the Medico-Chirurgical Hospital; Surgeon in charge of the Nose, Throat and Ear Department of the Northern Dispensary; formerly one of the Laryngologists to the Philadelphia Hospital. W. B. Saunders Company, Philadelphia and London. Canadian agents: J. R. Carveth & Co., Limited, Toronto.

As its name implies, this work was written for the use of students and general practitioners. It is issued in a concise and compact form, and deals with the investigation and treatment of the diseases of the nose, throat and ear in a practical manner. The object of the writer has been not only to impress his readers with the importance of facts that have been accepted for years, but also with the larger knowledge that has accrued from more recent investigations.

Treatment, however, seems to be the writer's strong forte. With him, to be anything is to be didactic—a good thing, no doubt, in a treatise for students—the larger liberty being assumed by them at a later date.

One would judge from his writings that the author rarely uses general anesthesia in operations upon the tonsils or within the naso-pharynx, even in cases of children; but when he does, ether is always the anesthetic chosen.

In speaking of the different methods of reducing hypertrophy of the faucial tonsil, when the electrocautery operation is the one chosen, he still refers to it in the old way of two decades ago, thus: "Five to fifteen operations are required to reduce the gland to satisfactory dimensions;" whereas, one-third of the number should be amply sufficient in any judiciously selected case.

In the treatment of the later stages of acute laryngitis, insufflations of 46 per cent. of sulphate of zinc in sugar of milk and gum arabic, or 50 per cent. of alumnol in sugar of milk, are otherwise recommended as appropriate remedies (? ?).

While minimizing the unimportant, the author deals at length with the more important subjects. The much-vexed question of operations for the correction of septal deformity occupies a large place; and many of the operations that have been practiced are described pretty fully. Naturally he gives prominence to his own, the Gleason or U operation; while, unfortunately, the H

operation—possibly a better one—he merely mentions by the letter. Submucous resection is not given a paramount place, and in this he is right.

Frontal sinus disease is not so fully dealt with as it might be; and it is to be regretted that the description of Killian's operation, the one that is at present receiving the widest attention, is both erroneous and incomplete. Killian *does not* shave the eyebrow in his frontal sinus operation; while he does more than is represented; for, in order to remove the anterior ethmoid cells and secure efficient nasal drainage, he chisels away a portion of the frontal process of the superior maxillary bone, leaving the superciliary ridge intact, and this is not mentioned by Gleason.

In so compact a work a due regard has been paid to all the ordinary diseases of the ear; and many valuable illustrations, a large number of them being original ones, are found throughout the work.

Carrying out the idea of unity, the author has discarded the ordinary division of his list into chapters, the different subjects of Nose, Pharynx, Larynx, and Ear being each a single story from start to finish; and on the whole the work can be highly commended to that large class of practitioners who devote themselves to general and not to special practice. The work closes with a series of medicinal formulæ.

Minor Surgery. By Edward Milton Foote, A.M., M.D., Instructor in Surgery, College of Physicians and Surgeons, Columbia University; Lecturer on Surgery, New York Polyclinic Medical School; Visiting Surgeon, New York City Hospital; Visiting Surgeon, St. Joseph's Hospital; Consulting Surgeon, Randall's Island Hospitals and Schools; formerly Chief in Surgery at the Vanderbilt Clinic. Illustrated with four hundred engravings from original drawings and photographs. New York and London. D. Appleton & Company. Price $5.00.

Dr. Edward Milton Foote, in his Minor Surgery, presents to the profession a book of the most practical nature. He covers fully and in detail exactly the class of surgical conditions with which general practitioners most frequently come in contact. He describes the treatment of many minor surgical processes which are almost untouched either by books on general surgery or the comprehensive systems of surgery. It will prove valuable to the older members of the profession by bringing some of their old-fashioned ideas up to date; although it is to be regretted that Dr. Foote has not seen fit to include such recently estab-

lished principles as the treatment of acute inflammatory changes by vaccine injection or by the hyperemic methods of Bier. It is almost needless to emphasize the infinite value of this work to both the surgeon in charge and the student in attendance at out-patient clinics, for it is from this class of cases that the author has drawn his data.

The book is divided into sections on the anatomical regions of the body, under each of which injuries, inflammations, tumors and deformities are discussed. The arrangement is excellent, and a good table of contents and index enable one to conveniently use it for reference. Original and well-finished photographs are profusely distributed throughout the book. If space allowed, one might mention numerous articles on particular subjects which are worthy of special attention. One cannot fail, however, to commend the author for including a chapter on the female genito-urinary organs, for which one usually has to refer to works on gynecology. Other chapters deserving of special mention are those on anus and rectum, on dislocations and fractures of the hand, on injuries of leg and foot, on bandaging and on surgical dressings. The medical profession has waited long for just such a book as Dr. Foote has written, and will thank him many times for the admirable way in which he has accomplished his ask. E. S. R.

Green's Encyclopedia and Dictionary of Medicine and Surgery. William Green & Sons, Edinburgh and London.

Vol. III—Earth Burial to Gummi Indicum. The two new volumes of Green's Encyclopedia which have just been received are issued in keeping with those already published, and in every way are up to the original standard. The number of subject-headings being so large, in this case numbering nearly eleven hundred, it is impossible to do more in a brief review than to draw attention to those whose importance is most striking. In the earlier pages we notice especially articles on Eclampsia, Ectopic Gestation and Eczema, following which comes one on Human Embryology, discussing general principles governing development, the chronology of embryonic life, the embryo being described week by week in its development. Organogentic rearrangements and the neofetal period finally receive attention.

The Enzymes, Epidemiology, Injury and Diseases of the Eye and Biliary Apparatus, and, lastly, a comprehensive review of gout, terminate the series.

Vol. VI. embraces in alphabetical order subjects from Lum-

bar Region to Nephrotomy, and, as in the former volumes, J. W. Ballantyne is responsible for the great majority of articles of less than 1,000 words. Here again we notice such prominent contributors as Osler, Stile, Tirard, and many others.

A large section is here devoted to the Lungs, tuberculosis occupying the greater part, and being edited by R. W. Philip, F.R.C.P.E. That on Malaria is one of the best, the illustrations being especially fine, while those on Meningitis and Nephritis are well worthy of perusal.

Immune Sera.—A concise exposition of our present knowledge concerning the constitution and mode of action of antitoxins, Agglutinins, Hemolysins, Bacteriolysins, Precipitins, Cytotoxins, and Opsonins. By Dr. Charles Frederick Boldnan, Bacteriologist, Research Laboratory, Department of Health, City of New York. Second edition, rewritten, first thousand. Published by John Wiley & Sons, New York. London: Chapman & Hall, Limited. 1907.

The title and the description above so fully covers the contents of the work that very little remains to be said. The general practitioner or student who desires to keep in touch with the latest advances in Immune Therapy cannot do better than carefully peruse Dr. Boldnan's excellent exposition of the most recent views and theories of disease, and its relation to the bodies found in the blood serum.

Erlich's side-chain theory is the first subject to be discussed in its relation to antitoxins, then the formation of agglutinins, according to the same theory, and the reception of various types are explained. Throughout diagrammatic figures have been profusely introduced to elucidate the subjects under discussion, and have proved of the greatest value in following some of the arguments.

Towards the end of the volume the author devotes chapters to snake-venoms and their antisera, also to serum sickness. Finally we beg to congratulate him on this excellent little production on a subject so full of interest to all students of medicine.

A Text-Book of the Practice of Medicine. The New (8th) Revised Edition. By James M. Anders, M.D., Ph.D., LL.D., Professor of the Theory and Practice of Medicine and of Clinical Medicine, Medico-Chirurgical College, Philadelphia. Octavo of 1317 pages, fully illustrated. Philadelphia and

London: W. B. Saunders Company. 1907. Cloth, $5.50 net; half morocco, $7.00 net. Canadian agents: J. A. Carveth & Co., Limited, Toronto.

We have received with pleasure the above volume, and noted many additions since the last edition, some of which are worthy of notice: the number of illustrations has been increased; many new and useful diagnostic tables have been inserted, and we also note that preference has been given to modern orthography and terminology throughout the text; certain other subjects, among which aplastic anemia, Stokes-Adams disease, Vincent's angina and the use of X-rays in leukemia, are prominent, have been newly discussed.

Since the book is primarily intended as an introduction to the study, rather than an exhaustive treatise, on disease, the author has avoided historic references and laid stress on the more practical side of the subject under consideration. Following the definition of each disease, he reviews first the Pathology, then the Etiology, Symptoms, Diagnosis and Treatment receive attention, thus presenting to the student a connected description of the subject. Emphasis has been placed on synthetic induction and differential diagnosis, and under the head of treatment the resources of preventive medicine, dietetics, and physiologic therapeutics have received due attention.

Essentials of Modern Electro-Therapeutics. An elementary text-book on the scientific and therapeutic use of electricity and radiant energy. By Frederick Finch Strang, M.D., Instructor in Electro-Therapeutics at Tufts College Medical School, Boston. Rebman Company, 1123 Broadway, New York.

The above is a profusely illustrated volume of about 100 pages, intended not only as a student's text-book, but as a practical aid to practitioners. The author has endeavored in some measure to overcome the "intense prejudice freely expressed by prominent members of the profession against the use of electricity as a therapeutic agent" by the production of this work.

The chapter headings include those on the laws governing matter, force and electro-physics. A section on Physiology from an electrical standpoint is worthy of attention. Then follow those on Galvanism, Faradism, Electro-Diagnosis, the X and Ultra Violet Rays, Photo-therapy and the Therapeutic Use of ozone concludes the volume.

A Manual of the Practice of Medicine. New (8th) edition, thoroughly revised. By A. A. Stevens, A.M., M.D., Professor of Therapeutics and Clinical Medicine in the Woman's Medical College of Pennsylvania. 12mo of 558 pages, illustrated. Philadelphia and London: W. B. Saunders Company, 1907. Flexible leather, $2.50 net. Canadian agents: J. A. Carveth & Co., Limited, Toronto.

That the medical students of this continent desire a compend of medicine is shown by the fact that Stevens' "Manual" has reached its eighth edition in nearly as many years. Although quiz compends are not the best form of text-books, and are not used by the higher type of student, yet there are many things to be said in their favor. This volume is a handy pocket size, has good type, and the various diseases are described very concisely.

Progressive Medicine. A quarterly digest of advances, discoveries and improvements in the medical and surgical sciences. Edited by H. A. Hare, M.D., Professor of Therapeutics and Materia Medica in the Jefferson Medical College, Philadelphia; assisted by H. R. M. Landis, M.D., Visiting Physician to the Tuberculosis Department of the Philadelphia Hospital. Vol. I. March, 1908. Lea & Febiger, Philadelphia and New York.

The contributors to this volume are: Floyd M. Crandall (Diseases of Children); A. B. Duel (Otology); C. H. Frazier (Surgery of the Head, Neck and Thorax); Braden Kyle (Rhinology and Laryngology); and R. B. Preble (Infectious Diseases).

Once every year *Progressive Medicine* covers the whole field of medical science, taking up a portion of it every three months. The March number is most complete in the subjects it deals with. No physician can keep up-to-date so easily as by reading this excellent quarterly.

Syphilis in the Army, and its Influence on Military Service; its Causes, Treatment and the Means which it is Advisable to Adopt for its Prevention. By Major H. C. French, Royal Army Medical Corps; Fellow of Royal Institute of Public Health; Associate King's College, London, etc. John Bale, Sons & Danielson, Limited, Oxford House, 83-91 Great Titchfield St., Oxford St. W.

Major French shows, by the valuable statistics he has compiled, that the Contagious Diseases Acts in Hindustan have been

to some extent effectual. For example, in 1895, when there was no control, 52.23 per cent. of the soldiers were admitted to the hospital for venereal disease, as compared with 20.03 per cent. in 1904, at the end of a period of seven years of control.

The book is full of interesting facts for anyone interested in this branch of public health.

SURGERY: ITS PRINCIPLES AND PRACTICE. In five volumes. By 66 eminent surgeons. Edited by W. W. Keen, M.D., LL.D., Hon. F.R.C.S. (Eng. and Edin.); Professor of the Principles of Surgery and of Clinical Surgery, Jefferson Medical College, Philadelphia. Vol. II. Number of pages 920, with text illustrations in colored plates. Philadelphia and London: W. B. Saunders Company. 1906. Per volume: Cloth, $7.00 net; half morocco, $8.00 net. Canadian agents: J. A. Carveth & Co., Toronto.

Volume II. of this very excellent work is equal in every respect to the first volume. In this volume the distinguished author has associated with him such men as Edward Hall Nichols, M.D., on "Diseases of the Bones"; Daniel N. Eisendrath, M.D., on "Fractures" and "Dislocations"; Robert W. Lovett, M.D., on "Orthopedic Surgery"; John Fairbairn Binnie, M.D., on "Surgery of the, Muscles, Tendons and Bursæ"; Frederick Henry Gerrish, M.D., on "Surgery of the Lymphatic System"; John A. Fordyce, M.D., on "Surgery of the Skin"; William G. Spiller, M.D., on "Pathology of the Chief Surgical Disorders of the Nervous System and Its Importance in Clinical Diagnosis"; George Woolsey, M.D., on "The Surgery of the Nerves" and "Surgery of the Spine"; F. X. Dercum, M.D., on "Traumatic Neurasthenia, Traumatic Hysteria and Traumatic Insanity"; and John Chalmers DaCosta, M.D., on "Surgery Among the Insane and Surgery of Insanity."

The subject of fractures covers 281 pages and is remarkable in its scope. The illustrations in this particular section of the work are very clear and accurate. All illustrations point in the simplest possible way. One on page 65 shows a fracture of the clavicle, a most excellent skiagraph, but an arrow indicates the direction of the fracture. Also on page 173 the measurements are so mapped out and designated that it is impossible for anyone not to be able to follow very clearly.

The X-ray photographs of joints, that we know are not always easily comprehended by the non-expert, are in this volume traced so as to clearly show what is intended. The surgery of the joints,

taking 95 pages, and that of dislocations, 90 pages, are exceedingly lucid and clear.

It is impossible to refer particularly in a work of this kind to many isolated subjects, but the "Surgery Among the Insane and the Surgery of Insanity," by J. Chalmers DaCosta, is exceedingly interesting, and rather a new departure. It is certainly done in a masterly way. We quite agree with his conclusion when he says: "My own opinion is that the operation for microcephalic idiocy is not justifiable. The only treatment for idiocy is education, discipline and hygienic care. Of course, in cases of idiocy certain complications may arise to justify operation, the operation being done for the complication, and not with any idea of curing the idiocy. Among those complications which may justify an operation are certain forms of epileptic attacks, muscular spasm, muscular rigidity or paralysis. An operation done for any of these conditions may improve the patient's comfort, although it will not improve the idiocy. A cranial operation may be justifiable in traumatic idiocy or in idiocy in which there are positive pressure-symptoms."

We predict a large sale for this work, and feel satisfied that the succeeding volume will not be in any way inferior to this work. We believe that the third volume is now ready for distribution. The typography, binding and paper have certainly maintained the high standard of the Saunders Company.

Human Anatomy, Including Structure and Development, and Practical Considerations. By Thomas Dwight, M.D., LL.D., Professor of Anatomy in Harvard University; J. Playfair McMurrich, M.D., Ph.D., Professor of Anatomy in the University of Michigan; Carl A. Hamann, M.D., Professor of Anatomy in the Western Reserve University; George A. Piersol, M.D., Professor of Anatomy in the University of Pennsylvania, and J. William White, M.D., LL.D., Professor of Surgery in the University of Pennsylvania. With 1,734 illustrations, of which 1,522 are original and largely from dissections by John C. Heisler, Professor of Anatomy in the Medico-Chirurgical College, Philadelphia. Edited by George A. Piersol J. B. Lippincott Company, Philadelphia and London. 1907.

We have had for some months this volume of Anatomy for review, and have very carefully considered the whole volume. We feel safe in predicting that it will replace as a text-book the works of Gray and Quain. We look upon it as the most complete text-book on human anatomy to-day. This work is the result of

the labors of five distinguished anatomists and one distinguished surgeon. Prof. J. Playfair McMurrich, Ph.D.—the present Professor of Anatomy in the University of Toronto—has supplied the systematic description of the muscular and of the blood- and lymph-vascular system. Dr. George A. Piersol (editor) has written the introductory, histological and embryological paragraphs throughout the work and contributed the description of the central nervous system, including the deep relations of the cranial nerves, of the organs of special sense, of the carotid, coccygeal and aortic bodies, and of the uro-genital system.

While the older works on Anatomy contain a certain amount of surgical anatomy, this volume has made a new departure and has broadened the scope of surgical anatomy into the practical application of anatomy to surgery. Prof. J. Wm. White, a distinguished surgeon and anatomist, has taken charge of this department, and undoubtedly succeeds in making it a most valuable addition to this admirable work. The illustrations in the volume are many of them original, and all of them accurate.

We predict for this book a large sale, and feel satisfied that it will be adopted as a text-book in the universities. The paper, printing and typography are far superior to the average, and the volume is not bulksome, notwithstanding the fact that it contains 2,100 pages.

Selections.

SURGICAL HINTS.

In making a deep incision for whitlow, it is important not to lay open the tendon sheath from end to end, owing to the great danger of sloughing of the tendon.

In curetting the tympanic cavity it is necessary to bear in mind that the carotid artery is in close proximity to it, and great care is required to avoid perforating the thin wall which separates them.

In spina bifida, if the protrusion is a small one, operation can often be avoided by careful replacement into the spinal canal and the application of a disc of pasteboard held in place with adhesive strips and a bandage.

To reduce a congenital hernia in an infant, an excellent method is that recommended by Owen, of holding the child up by its feet. In this way, the omentum is prevented from dropping into the funicular process during the reduction.

To avoid an unsightly scar after operation for torticollis, the cutaneous incision should be so planned that the cicatrix will lie parallel with the clavicle. This can be done by slightly drawing up the skin before it is incised. In dividing the sternomastoid, care should be taken not to wound the deep cervical fascia.—*International Journal of Surgery.*

Advantages of Iodipin over Potassium Iodide.

Notwithstanding attempts to obviate the depressing effects of potassium iodide, there will still be patients who absolutely cannot take potassium iodide in the needful quantities at all. It becomes necessary to find some other iodine preparation that they can take. As an example of an iodide which produces all the good without many of the bad effects of potassium iodide, we have iodipin. Many medical men of standing have tried it, and have reported well of its effects. It will probably not be tried until potassium iodide has been found impossible of use in any particular case; but, failing potassium iodide, it is good to know that iodipin can take its place.

The preparation is a combination of iodine with sesame oil, discovered by Winternitz; it can be prescribed in various strengths, the two most usual being a 10 per cent. solution and

a 25 per cent. solution. Upon the continent it is largely administered by subcutaneous or intramuscular injection; if it could be used only by this method it would commend itself to few, but, among others, Dr. Stopford Taylor and Dr. MacKenna, of the Liverpool Skin Hospital, have watched the results of giving it by the mouth, and they find them excellent. Some very severe cases of tertiary syphilis were thus treated by them, with rapid improvement in the condition. They prescribed 30 min. of 25 per cent. iodipin in milk, three times a day, about two hours after food. In twelve days, after taking 1 1-2 oz. of iodipin altogether, the lesions, previously very severe, were upon the high road to being healed.

They find that whereas potassium iodide is very rapidly eliminated from the body, particularly in the urine, iodipin is thus lost much more slowly; even two months after the last dose iodine has still been found in the urine. This slow elimination is possibly one of the chief causes of its efficacy; in any case, no symptoms of iodism, and no depression is observed, and the patients gain, rather than lose, flesh.—*The Hospital*, July 6, 1907.

Post-Hemorrhagic Anemia.

The anemia which follows the hemorrhages of trauma, gastric or intestinal ulcers, severe epistaxis, child-birth, profuse menstruation or hemorrhoids presents a clinical picture that is so well known that it requires no description.

Examination of the blood immediately after a severe hemorrhage usually shows no apparent change in its number of corpuscles, for the portion lost withdrew the blood as a whole, and the portion remaining in the body, while decreased in volume, will be found to contain a normal ration of the fluid and cells. Shortly after a hemorrhage, however, the tissues of the body give up large quantities of fluid to restore the necessary volume of the blood, and a condition of true hydremia ensues. Examination of the blood three or four hours after a severe hemorrhage, therefore, shows a very marked oligocythema. Reconstruction must now take place, and the response to the bodily demand is sometimes remarkably prompt, but in most instances it is a hard up-hill fight. This is to be expected, for the disproportion between the cells and the fluid elements of the blood, and the essential depression of all vital functions, makes recuperation a difficult process at best.

Much can be done, however, to assist the body in its efforts to restore normal conditions. The first and most essential re-

quirement is absolute rest in a prone position. In some instances, it may be necessary for a few days to have the couch or bed tilted so that the patient's head shall be lower than the feet. Sudden movements or a sudden rising to an upright position must be strictly interdicted, as these are always liable to produce a fatal syncope. Following severe hemorrhage, the blood pressure is always lowered, and even if a certain degree of tension is apparently restored, it is very unstable, and may be lost instantly, with all of the resulting dangers on the heart and central nervous system.

Another precaution to be taken is to frequently change the patient's posture from one side to the other. The hydremic state of the blood, and the loss of blood tension predisposes to gravitation edema in the lungs and other organs, and the simple procedure of changing the patient's position often avoids annoying and serious complications.

Considerable quantities of water are always necessary after hemorrhage, but it should never be given in large amounts at any one time. Two or three tablespoonfuls at a time by the mouth every few minutes is much more beneficial than to allow a patient to drink to satiation. Excessive thirst is always soon controlled by small enemas (one pint) of saline solution, as warm as can be borne, repeated every three or four hours. These also serve admirably to very materially raise arterial tension. It is no uncommon thing to observe complete anuria for even twenty-four hours after severe hemorrhages, but the warm saline enemas soon correct this condition.

Feeding is one of the most important details in post-hemorrhagic treatment. Liquid food should be used in preference to solids, for obvious reasons, and may consist of milk, beef extracts, white of eggs, etc. Small quantities should be given at short intervals, as it must be remembered that the digestive function is always more or less depressed and can only do a portion of its usual work. A good reliable hematic is early necessary, one that can materially hasten hematosis without endangering the digestive and assimilative functions in any way, shape, or fashion. Pepto-Mangan (Gude) is one of the most dependable remedies of this class, and its hematopoietic properties are well known. Under its use the cellular elements of the blood are rapidly increased, and the whole physical condition is greatly improved. The various organs resume their functions and the distressing and dangerous effects of hemorrhage are safely and properly overcome.

Facts About Digitalin.

Ten years ago Henry Beates, of Philadelphia, published a remarkable paper in which he called attention to the superiority of digitalin-German over all the other preparations of digitalis, his conclusions being that this substance is a derivative not contaminated with other active principles, possessing uniform and unvarying strength, relatively free from that property which produces gastric irritation, a powerful stimulant to the whole cardiac apparatus, and a reliable and pronounced stimulant to the vasomotor system, which does not develop cumulative action, the adult dose ranging from 1-10 grn. as a minimum to 1-2 grn. as a maximum. He found it applicable to all lesions of the heart, with the single exception of mitral regurgitation complicated by dilation of the auricle.

Last February, ten years later, Dr. Beates stated that his further clinical experiences have more conclusively proved the therapeutic value of this digitalin. During these ten years he has treated numerous cases with this product, in the doses and manner outlined, with the most satisfactory results. He says: "I cannot too strongly urge upon physicians the liberal use of digitalin in cases with circulatory disturbances. In collapse of pneumonia, typhoid fever, and in surgical shock as large as 2-grn. doses in 25 cc. of salt solution, hypodermically, has been successfully employed in several instances."

Dr. Beates, as the head of the Pennsylvania State Examining Board for many years, is a man of unquestionable standing; more than that, in his ability as a clinical observer he has few rivals and no superiors, even in that centre of medical culture, Philadelphia. Such testimony is of infinitely greater value than that of any number of even the most accomplished pharmacists. —*Amer. Jour. Clin. Med.*, Feb., 1908.

Some Notes on Styracol.

Charles B. Reinhardt, of London, Eng., states that it is his principle to avoid the use of drugs as much as possible in the treatment of consumption. In the ordinary case there is no advantage in administering drugs when the open-air treatment is followed. Even those suffering from such symptoms as dyspnea, diarrhea, or cough do not always demand medicines. There is, however, one preparation, guaiacol, which is of decided benefit in the treatment of phthisis. Dr. Reinhardt cites a case of cavities in the left lung, in which a fairly good prognosis could be made, owing to the non-involvement of the right lung and the absence of fever. Guaiacol had been given, but was dis-

continued. Very soon the cough became more pronounced, physical examination revealed extensions of the process, and diarrhea appeared. Six weeks after admission, apparently without special cause, the patient again improved, and, on investigating, it was found that he had been secretly taking guaiacol since this time Styracol (the guaiacol cinnamic acid ester) was then prescribed, and a steady improvement followed. The patient is at present married and in good health.

Styracol was tried in a number of other cases, always with encouraging results. The absence of taste and the fact that the drug splits up into its components only in the small intestines makes it preferable to guaiacol.

Where intestinal tuberculosis was suspected or there was merely an accidental diarrhea, styracol was given with advantage, and, too, when there was much cough, expectoration or moisture in the lungs. In one instance an extremely offensive expectoration from a large cavity was corrected.

Ill effects never followed the administration of styracol and more benefit was usually experienced than with guaiacol, probably because the cinnamic acid is also an efficient agent in tuberculosis.

Styracol was given as powder and in tablets. The latter should always be chewed so as to assure absorption.

In the author's opinion, styracol is one of the best available intestinal antiseptics, and its continued use will impregnate the system with guaiacol.—*British Med. Jour.*

Iodipin in the Treatment of Cerebrospinal Syphilis.

A. J. Korolkoff, working in von Bechterew's Clinic in St. Petersburg, reports on the result of the use of iodipin in the treatment of syphilis of the brain and spinal cord after a trial of two and a half years. It is just ten years ago that Winternitz recommended this iodine preparation, and the results as given by the present author are but corroborative of those of a number of observers. Although the remedy is specially adapted to administration by means of the mouth, the author chose to use it hypodermically, by intramuscular injections. To carry on the injections, the iodipin is first warmed in a test-tube to a temperature of about 104 degrees F., which proves most agreeable to the patient. The site for injection is then cleansed with ether and 95 per cent. alcohol, and the injections administered, preferably into the gluteal muscles. The injection is carried out very slowly, 10 to 20 cc. of the 25 per cent. iodipin being used at a dose. The site is massaged for a few moments in the ordinary manner.

Injections are made every week or ten days, and 20 to 40 injectments constitute a "treatment." Careful urinary analyses have shown that there is a breaking down of the molecule in the body, and iodine itself becomes available. Korolkoff has found this method of treatment particularly valuable for various grades of cerebrospinal syphilis, especially in those severe grades which show a marked tendency to chronicity and progressive deterioration. He reports on a number of patients, 7 cases of spinal syphilis, 5 cases of cerebrospinal syphilis, 10 cases of cerebral syphilis, 4 cases of para-syphilis, 2 of tabes, 2 of general paresis, 2 of syphilitic cerebral neurasthenia, and 4 cases of mercurialism. In the spinal cases, in which meningomyelitis was the prominent factor, the patients improved greatly; in three the acute symptoms subsided. In one case of acute transverse myelitis, with marked paraplegia, the motor functions were completely restored. In two old cases of meningomyelitis the ability to walk was not improved, although the general condition was markedly improved. In one case, of three years' standing, of complete paraplegia under mixed treatment, there was a marked objective and subjective improvement. In the cases of cerebrospinal syphilis improvement in the general condition was marked, and complete cure resulted in some cases with marked motor and sensory signs. In the two cases of tabes the pains were greatly improved, the paresthesiæ disappeared, and the patients gained markedly in weight. In one case there was a marked improvement in an optic atrophy. The paretic cases improved in weight somewhat, but there was no positive beneficial result. The neurasthenic cases were much improved, while the cases suffering from ptyalism following mercurialization rapidly recovered.—*Obosrenie Psychiatrii, Neurolog i. experiment. Psychologie*, May, 1906.

The Necessity of Rest After an Acute Illness.

With the advances of bacteriology in its relation to the practice of medicine we learn more and more that many of the conditions of acute illness which we have been accustomed to consider as distinctly local in character are really dependent upon a general systemic infection, in which state all organs of the body suffer to some extent, although certain organs may bear the brunt of the disease, or at least present more sharply defined symptoms than are found in other parts of the body. This important recognition of the fact that nearly all infection is a general condition, rather than a local one, emphasizes the necessity of the physician carefully investigating the state of each

important organ of the body when prescribing for and giving advice to patients who are taken ill, or who are recovering from an acute illness. It not longer suffices to observe alone a diminution in the chief manifestations of a disease before giving a patient a clean bill of health. Such carelessness leads not rarely to prolonged ill health or even permanent invalidism. Thus the number of instances in which patients recover from an acute rheumatism only to become cardiac invalids is by no means small. Even in the case of such a disease as acute articular rheumatism, which is known to exercise a very deleterious influence upon the endocardium, physicians are prone to allow their patients to get up as soon as the joint manifestations are considerably modified. Such a mistaken method may not produce immediate evil effects because the heart muscle may be strong enough to compensate for the damage done to the valves, but ultimately the patient comes under medical observation a second time because he has symptoms of cardiac disability, and then it is recognized that the attack of acute articular rheumatism which occurred some years before is really the direct cause of the grave ill health which is present. It is our own custom to insist that patients who are suffering from acute articular rheumatism should remain at absolute rest for a period of not less than three weeks after the joint symptoms are in abeyance, and this practice has been forced upon us, not only by personal experience which indicates that getting up at an earlier date is prone to result in disaster, but because every clinician continually sees instances of cardiac disease which have undoubtedly had their origin in a rheumatic endocarditis months before.

The necessity of carefully studying the condition of the heart is not limited, however, to that acute infectious disease known as articular rheumatism; it should be extended to every acute infectious disease, whether it be a prolonged illness, as is usually the case in typhoid infection, or whether it be in pneumonia or influenza. While it is true that in acute articular rheumatism the effects are chiefly exercised upon the endocardium, particularly that of the valves, in typhoid fever, pneumonia, and influenza, the venom seems to be chiefly concerned with producing muscular degeneration or great feebleness, and so it not infrequently happens that the patient who gets up too early and thereby strains an enfeebled heart muscle suffers for months and years from cardiac feebleness with or without a certain amount of dilatation, and oftentimes dates his physical incapacity to the attack of influenza or typhoid fever which occurred a long time before. Pathologists have recognized

these cardiac changes much more fully than have clinicians, and have repeatedly urged upon their active colleagues the necessity of considering secondary cardiovascular degeneration. Of course, the necessity of rest after one of the acute infections is far greater in the patient who already has some valvular lesion or tendency to cardiac feebleness than it is in the patient who starts out with a fairly strong cardiac mechanism.

In other words, this is an instance in which the physician is not concerned so much with the administration of drugs for ease, but is relied upon by his patient for advice which will be effective in preventing subsequent ill health, and this advice the patient has a right to expect and to demand.—*Therapeutic Gazette.*

Veronal for the Relief of Itching.

Many of the recent coal-tar and synthetic products have been recommended to give relief from itching, and frequently they will have a more or less beneficial effect; but they must be used with great caution, and frequently the subsequent results are unsatisfactory and even harmful, writes L. Duncan Bulkley, physician to the New York Skin and Cancer Hospital, in an interesting article on the significance and treatment of this unpleasant sensation. Many times he has seen cases in which the use of trional had certainly aggravated the real trouble, and he has thought that the same was true after some of the other so-called analgesics which have been used of late years.

Veronal, however, seems to be an exception, and he has used it, often in repeated doses, with good effects, and apparently also without subsequent harm.—*Jour. A. M. A.*, July 27, 1907.

Treatment of Locomotor Ataxia with Fibrolysin.

In the following case of locomotor ataxia treatment by fibrolysin was followed by much improvement and by return of the knee-jerks, reports F. M. Pope, of Leicester, Eng.

J. B., aged 32, was admitted to Leicester Infirmary on Dec. 20, 1906, complaining of shooting pains in the legs and numbness of feet. He had noticed the symptoms for the past two years; had had great difficulty in walking in the dark; for the previous four weeks had been confined to bed, unable to walk at all.

He had an "abscess on the chest" fourteen years ago, urethral discharge ten years ago; no clear history of syphilis.

He was very ataxic. Romberg's symptom marked. Incoordination of both upper and lower extremities was marked. Unable either to stand or walk. Argyll-Robertson pupil phenomena

marked; no nystagmus. Knee-jerks absent. Facial muscles of right side slightly atrophied. Right side of tongue slightly atrophied. No morbid changes to be detected in other organs.

He was kept under observation for nearly a fortnight without treatment, and his condition underwent no change. On Jan. 2, 1907, treatment by intramuscular injections of fibrolysin was commenced. He received 2.3 cc. (the contents of one vial) hypodermically every alternate day. On Feb. 12 he had had nineteen injections, and could stand better, and walk a little with assistance. Legs warmer, but still much inco-ordination. On Feb. 20 had had twenty-one injections. Knee-jerks were then present on both sides. On March 6 had had in all twenty-four injections. No injurious local effects. Immediate effects of each injection were a feeling of warmth and diaphoresis. He went out walking with assistance.

On May 1 he walked up to the hospital with two sticks. The knee-jerks were still present. He had no shooting pains. Pupil reaction unchanged. Achilles reflex faint but perceptible.

A second case treated at the same time shows little or no improvement, but this does not, in the author's opinion, outweigh the positive results obtained in the first case. Ormerod, in "Allchin's System of Medicine," says: "We think that when ataxia has developed steadily and become thoroughly established, it is likely to be permanent"; and most people will agree with him. In this case advanced ataxia had retrogressed so that the patient can get about and the knee-jerks have returned.

Dr. Pope regards his communication as merely a preliminary note, hoping that it may lead to a further trial of fibrolysin.—*British Med. Jour.*, June 22, 1907.

Typhoid Bacilli in Lice of Typhoid Patients. By Dr. Nakao Abe (*Muench. med. Woch.*).

The author triturated lice obtained from the heads and bodies of typhoid patients, placed a part of this material under the skin of white mice and a part in bouillon. From the latter, after incubation, cultures were made upon typhoid media. In both instances typhoid bacilli were obtained in 75 per cent. of the tests. The bacilli were not found in fleas taken from attendants of typhoid patients.

Spanish law requires mothers to refrain from work for a period of four weeks after childbirth, and factory managers are compelled to retain on the payroll women absent for this cause. Provision is likewise made for nursing the infant, time being allowed in the morning and afternoon for the purpose.

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Original Communications.

ORTHODONTIA.*

By J. A. C. Hoggan, D.D.S.

Orthodontia received little attention until within the last half century, the most interest having been awakened in the last twenty, and the greatest advance made in the last six years. The progress made has been in the broader and more detailed study of the science. Previously it was the custom to rest the welfare of each case upon the inventive genius of the dentist in charge. To-day cases are classified in groups. We may get appliances to correspond to each class, and we rely upon these appliances only as an assistance to Nature. We study the mouth, jaws, teeth, lips, nose, etc., to find out Nature's plan, and only with a thorough knowledge of embryology, histology and comparative anatomy can we arrive at a conclusion.

Orthodontia is based on the normal occlusion of the teeth. Occlusion is the locking of the teeth together and their relation when the jaws are closed. The Ideal of Orthodontia is Art, the perfection of Art is Harmony, and the result of Harmony is beauty.

When the forces which govern occlusion are perverted we call it malocclusion; perversion of the normal. Malocclusion is found in all races and even occasionally in the lower animals. It is very common and is becoming more common. The thoughtful man is asking: Why are there so many mutilated, irregular, twisted, deformed and positively ugly mouths among the people we

*Read before the Hamilton Medical Society, April 1st, 1908.

meet? In proportion as malocclusion exists the function of the teeth, speech, and facial lines are impaired. The opportunities and possibilities of improvement of the facial lines and features are so great, and the appreciation of the parents and friends so genuine, we wonder that a closer study and a keener interest was not awakened in the medical practitioner long ago. It is to be greatly regretted that so few have a proper conception of Orthodontia and its work, and the possibilities of improvement upon the speech, health and beauty of the individual.

The work and treatment of Orthodontia is not based upon irregular teeth but normal occlusion of the teeth. We must have an intimate knowledge of facial type, a quick perception of the normal in that type. Type in the individual is made up of the predominating characteristics of that race to which he belongs. We must consider the numerous changes which occur subsequent to tooth movement.

Let us now get a definite knowledge of the forces which govern normal occlusion.

These forces are:—

1. The incline planes of the teeth.
2. Muscular pressure of lips, cheeks, tongue, etc.
3. Harmony of the dental arches, or the normal relations of the teeth of one arch to the other.

The importance of the incline planes of the teeth arises from the fact that these planes act as guides to the erupting teeth, as they emerge from the gum. The first permanent molar is one of the first of the permanent dentition to erupt, it arrives behind the last deciduous or baby molar about the sixth year. The last deciduous molar acts as a guide to the permanent one. The lower molar erupts first. When the other upper molar comes into position, it is guided by its own and the incline planes of the opposing lower molar. Now it depends upon the position of the cusps of this lower molar at this time as to whether these corner stones of the denture are going to lock normally or not. Therefore, we have the same force perverted into an abnormal one and governing now. Malocclusion, if the cusps of the erupting teeth are diverted from their right course, and if the teeth first to erupt are misplaced, is surely followed by a general malocclusion throughout the mouth.

Muscular pressure acts upon the teeth to mould them into position. The tongue exerts an outward pressure while the lips and cheek muscles exert an inward pressure.

Harmony of the arches is essential. The teeth of the lower jaw erupt first; this creates a mould over which the upper arch is

fitted. Any abnormality or inharmony in the position, size or relation of the teeth of the lower arch will be reproduced or exaggerated in the upper. Further, we will have a reaction from the upper arch, and the lower trying to accommodate itself to the irregularities of the upper, so the forces which govern normal occlusion perverted become the forces of malocclusion. And if we do not place each and every tooth in its normal and destined position, we cannot expect it to remain there or be maintained permanently.

The causes of malocclusion are many, and those things which interfere with nature's plan of the denture we divide into three great classes:

1. Congenital causes—Hare lip, abnormal frenum labii, supernumerary teeth, missing teeth, large tongue.

2. Constitutional causes—Adenoids, lack of development, eruptive fevers, rickets.

3. Local causes—Premature loss or decay of deciduous teeth, prolonged retention of deciduous teeth, premature loss or decay of permanent teeth, tardy eruption of permanent teeth, habits of the lip, tongue, thumb, etc., alveolar abscess, accidents, and fractures. Constitutional causes are of the most importance to the physician, and of all the factors in producing malocclusion the most potent is nasal obstruction, of any kind, but especially that produced by adenoids.

The symptoms of mouth breathing in the child are very plainly marked. It causes atrophy of the nose and jaws. It creates a derangement in function of the muscles of the lips, cheeks and tongue.

In normal breathing the air is warmed, moistened and strained of its impurities. It aids in the maintenance of health in the tissues over which the air passes during inspiration and expiration. It in no way interferes with the delicate balance of pressure between the tongue on the inside and the lips on the outside. It allows the mouth to close and the teeth to lock normally. This balance of pressure is a very important factor. If, however, mouth-breathing becomes established, this beautiful balance of pressure is destroyed. The patient becomes pale, anaemic, the nose short with small wings, the upper lip short and curled upward, the mouth open, the teeth and gums exposed, dry and inflamed, with protruding and elongated upper incisors, narrowed or contracted upper arch, high vault. The lower anterior teeth are lengthened and frequently come in contact with the roof of the mouth when the jaws are closed. The tongue rests now on the floor of the mouth, it no longer maintains the form

of the upper arch. Now, various nasal obstructions produce different forms of malocclusions. The mucous membrane lining the nasal cavities covers a large area. Any irritant causing the membrane to become inflamed and thickened, as in chronic hypertrophic rhinitis, or atrophic rhinitis with polypi will obstruct the air passages. This class of nasal obstruction creates a mouth-breathing that may be only temporary or intermittent, but if persisted in long enough to interfere with the development of the bones of the floor of the nose, the septum or turbinates it will also retard the development of the intermaxillary region, causing a crowding of the upper incisors.

Contrast this form with that of obstruction with adenoids. You do not have the crowding of the anterior teeth, but a protrusion and a receding lower jaw, a short upper lip, thickened lower lip, which is wedged in between the lower and upper anterior teeth. This lower lip simply acts as would a rubber wedge and forces outward the upper teeth and holds backward the lower arch and jaw. This in time spreads the upper anterior teeth like a fan. In this class of cases the malocclusion is general, in the other it is confined to the anterior region.

How important then is it that nasal breathing be maintained during the early period of development. The most critical years are those during the eruption of the first permanent molar teeth. Those of the lower jaw precede those of the upper. The cusps of the upper molar are fitted into the fossae of the lower molar. If for any reason the cusps are not occluded properly, then we have the pernicious commencement of malocclusion, and all of the teeth following will be out of harmony or normal occlusion.

In mouth breathing, the mouth is open, the lower jaw drawn downward and backward, the lower molars are almost certain to lock distal to normal. Frequently it occurs on one side of the arch only. If it has been but temporary, you will have the malocclusion of these molars with the lower jaw distal to normal, but with normal nasal and lip function. These cases show a distinct marking in the position of the incisor teeth. These teeth overlap each other in one or another of several forms. The overlap is caused by an effort of the muscles of the lips to overcome the malocclusion started in the back molars years previously during a temporary mouth-breathing. Still another form of malocclusion is the protruded and over-developed lower jaw and arch, with the upper anterior teeth occluding inside the lower, and the lower molars now mesial to normal instead of distal as in mouth-breathing. This class of cases is due to enlarged tonsils. A very important local cause is loss or decay of

the deciduous teeth. Those teeth should be preserved until the permanent teeth are about to erupt. Great care should be given that the child is placed at once in the hands of a competent dentist.

In the treatment of malocclusion, we first remove the cause, whatever that cause may be. If it is nose or throat trouble, place the patient in the hands of a competent physician or rhinologist. Restore the normal occlusion of all of the teeth. Every tooth should be placed in its proper position and held there for a time to allow the alveolar process to develop about it, and the incline planes of the teeth to accommodate themselves to their new opposing surfaces, and the muscles of the face to functionate properly.

In treating such cases as protrusions, we pit the force necessary to move the teeth of one jaw forward against the force necessary to move the teeth of the other jaw backward.

In moving teeth the greatest force to overcome is that of the peridental membrane fibers. The fibrous membrane surrounding the root of each tooth consists of inelastic connective tissue, and is richly supplied with nutrient vessels and nerves.

The fibers of the membrane pass from the cementum of the root to be inserted into the alveolar process. The arrangement of the fibers is such that they pass in every direction that will resist the movement of the tooth under its normal stress when extra or mechanical force is applied. The osteoclasts absorb the bone in front of the tooth and osteoblasts build up the bone behind. The peridental membrane fibers are cut off or pulled away from their insertion, not all at once, but one here and there, probably the shorter ones or weaker ones, or those in the vicinity of greatest pressure. These are quickly reinserted by having new deposits of bone laid about them. This process is repeated over and over until the teeth reach their final position.

Let me say that in those cases where we have great protrusion of one jaw with recession of the opposite one, leaving a large gaping space between the two arches, it is impossible to establish normal nasal breathing without the aid of the Orthodontist. It is just as essential that the teeth, jaws, and muscles be made to functionate properly as it is that the nose be cleared.

Finally, let me say that we believe the best balance and harmony of the mouth and rest of the face is only possible with normal occlusion. Our best efforts are to assist Nature and interpret her wishes, and if we do so intelligently she will complete the growth and development of those tissues in accordance with the type of the individual. To do this we should start the

treatment in early childhood that we may get the tissue at a time when Nature will give the greatest response.

The following points were brought out in the discussion of the paper:

The ideal at which to carry out the treatment of Orthodontia is during its initial stage—the moment it appears.

The importance of the preservation of the deciduous teeth cannot be too greatly urged. If decay occurs have the teeth treated by a competent dentist, and if the teeth are lost the space they occupied should be maintained so that the permanent teeth may meet the natural conditions when erupting.

Room 19, Federal Building, Hamilton.

PRIMARY CARCINOMA OF THE NECK.*

By F. Arnold Clarkson, M.B.,
Demonstrator of Pathology, University of Toronto.

Primary cancer of the deep tissues of the neck, or as it was named by Volkman, branchiogenic carcinoma, is so rare that every case of it is interesting enough to report. A comparatively large number of primary malignant tumors in the upper part of the neck have been observed, it is true, and have been called carcinoma, but recent investigation has shown that many of them were peritheliomata originating in the carotid gland. Secondary carcinoma of the neck is, of course, seen very often, and there is always the chance that what is considered a primary growth is in reality only a secondary development from a very small carcinoma in some obscure location where it escapes the observation of the clinician and even of the pathologist.

The following history is a fair type of the few cases which have been reported:—Mrs. F., a nulliparous woman, aged 60, sought medical advice on December 29th, 1905, for a rapidly growing tumor on the right side of her neck, which she had first observed about six weeks previously. The swelling had reached such a size that she had great difficulty in swallowing, and this was the unpleasant symptom which brought her reluctantly to a physician.

She was an undersized, badly nourished Englishwoman, with a most pronounced scoliosis, the rotation being to the right. Previously in very comfortable circumstances, she had been by bad investments reduced to adject poverty. The family history had little of interest, except that her mother was insane. The general appearance of the patient indicated a recent loss of flesh.

The tumor, situated in the anterior triangle of the neck, was, on the first examination, of stony hardness, 2 1-2 inches vertically, and two inches from side to side. It was freely moveable and unattached to the skin. At the lower pole was a small nodule, evidently connected with the larger growth. Any handling of the tissues caused a good deal of pain, but otherwise the patient suffered little discomfort.

The pharynx, larynx, esophagus and nose were carefully examined for a carcinomatous lesion, but none was found.

The tumor increased rapidly in size, the concatenate glands enlarged, the cachexia and weakness became more pronounced,

* Read at a meeting of the Pathological Section of the Toronto Academy of Medicine.

till death ensued on the 6th May, 1906, about 5 months after the initial symptoms. About the middle of March the largest mass became soft and fluctuating, ruptured and discharged a small quantity of debris.

The autopsy, kindly performed in my absence from the city by the house surgeon, revealed a number of enlarged lymphatic glands on the right side of the neck extending downwards from the original growth, which was capsulated and only slightly attached to the surrounding tissues. The interior of the tumor was filled with necrotic material. Although the esophagus and air passages were carefully examined, no other neoplasm was discovered.

Microscopical Examination.—Sections from the primary growth showed a large number of squamous epithelial cells in alveoli, with a good deal of necrosis and fatty change. The lymphatic glands contained also squamous epithelial cells closely packed together.

Etiology.—Early in the development of the embryo, the visceral clefts become closed, and so far as can be seen from the surface, completely disappear. The 1st, 2nd and 3rd clefts are, apparently, completely obliterated in the adult, but it is supposed that, during the process, in some cases at least, part of the surface epithelium is folded in, and from this, at a later period of life, the neoplasm begins, occupying the situation generally conceded to be that of the 2nd branchiogenic cleft.

Occurrence.—All the cases I can find reported were in men of middle age. This patient was a woman. The right side seems to be more frequently involved.

Course.—The tumor develops slowly and insidiously at first, the patient's attention being attracted to it only when it is large enough to cause pain. After this the growth of the tumor is rapid and the patient dies in a few months. I can find only one record of cure by surgical intervention.

Diagnosis.—The condition must be distinguished from a secondary cancer where the primary focus is concealed. Barnard (Polyclinic, 1904) reported a case of malignant glands due to an epithelioma of the pharynx so small as to escape detection during life. There is always the possibility of a primary neoplasm in the nose, larynx or esophagus. Tuberculosis also must be taken into consideration. Even when the tumor is removed, the cheesy debris of the interior is hard to distinguish from a caseating gland.

The prognosis is hopeless, probably because the condition is recognized too late.

TWO CASES OF SURGICAL INSANITY FOLLOWING SIMPLE FRACTURE.*

By Dr. A. H. Garratt, Toronto.

There are numerous cases reported of mania following injuries to the head, also following surgical operations; but there are very few reported cases of insanity following simple fracture.

Dr. Shepherd, Montreal, reported two cases of intracapsular fracture of the femur, followed by insanity, twenty years ago; both recovered.

Dr. Howard Kelly reports 20 cases of mania following minor plastic operations with one death. A few of these cases were slightly toxic, but most of them were free of any septic condition, the insanity being due to disturbance of the mental equilibrium brought about by the strain of the operation, superadded to mental excitement antedating the operation.

Dr. Keene says these cases are traumatic neurasthenia and traumatic hysteria only, not insanity.

Dr. Howard, Baltimore, thinks there is little ground for the use of the term insanity in these cases, were it not for the existence of infective processes accompanied by delirium or prolonged depression.

Case 1.—Mrs. F., aged 50, a healthy woman of a nervous disposition, in October, 1896, fell from her bicycle, fracturing her Tibia. The bone was set without anesthesia, and her recovery was without incident.

Four years later, Sept. 2, 1899, Mrs. F. again fell from her bicycle and fractured the Femur at the junction of the upper and middle third. She was treated at home on a fracture bed with Liston's long splint and extension in the usual way.

A general anesthetic was given to diagnose the fracture and apply the splint. For a few days there was no more anxiety on the part of the patient than when her leg was broken four years before. At the end of the first week, however, marked hysterical symptoms were noticed, and from day to day grew worse.

When questioned she did not complain of pain, but said she would never get well, that her second accident would certainly kill her. By Sept. 12th, the hysterical symptoms were so violent, a second nurse was engaged, and in a few days more she developed a confusional insanity. On Sept. 24th she refused to swallow food or drink, and was moved to St. Michael's Hospital where she received rectal feeding till her death on Oct. 7th, 1899.

*Read at meeting of Academy of Medicine, Toronto.

Case II.—Miss H., aged 22, is a well developed healthy girl whom I have personally known for many years, although she never required my services before.

Her mother is a healthy woman with a family of three children, all healthy and particularly free from any nervous disorders. Miss H. had never been hysterical before this winter, but her mother told me that she complained unusually about pain caused by the dentist, when it was necessary to have any work done in her teeth.

On Dec. 26th, 1907, Miss H., while tobogganing in High Park, had a simple fracture of the Tibia and Fibula. A temporary splint was applied and she was removed to her home in the ambulance.

Three hours later when I first saw her she was very nervous and apprehensive about what was to be done for her. She was told that it was not a bad fracture, that she would soon be out again, and reassured as far as possible to relieve her anxiety.

She begged the anesthetist to be sure and give her plenty of chloroform, and to keep her asleep a long time. When she awoke and found her leg in a splint, she was much calmer, but complained of pain. One-eighth grain of morphia was given in repeated doses, but she got very little sleep. The day following the accident she was restless, and complained of pain about the region of the fracture.

On the 3rd day as she complained so unusually, I changed the splint to a double inclined plane, and as the morphia did not relieve her I tried sodae bromide and tr. valerian amon.; for 24 hours she did not complain so much and slept a few hours.

On the 5th day the sedative had no apparent effect, and the patient had a sleepless night, moaning and crying incessantly. When asked what she cried about, she would say, "I don't know," or "I wonder what Jennie and Kate are doing." These I learned were girl friends.

Her mother said she constantly worried about things outside of the house, and only spoke of her leg when her attention was drawn to it.

Trional and sulphanol were tried for the sleeplessness with poor results, also hot sponge baths and massage.

On Jan. 9th, 1908, the 15th day, Dr. Goldwin Howland saw her, and looked upon the case as one of hysteria, but as she was completely confused on time he thought it might result in insanity.

There were no anesthetic areas found in Dr. Howland's examination, but a few days later when I renewed the bandages

she complained with a shriek of a terrible pain in the foot. On careful examination I found the foot of the affected side hypersensitive on the inner side, and just above the cleft between the first and second toes, an anesthetic area of about 1 inch in diameter. This was the only area of anesthesia found.

The nurse told me that it was only on the occasion of my visits that she complained of her foot or leg, and I noticed that no complaint of pain was made during my visit until the splint or bandages were touched.

On Jan. 12th she refused solid food, and had incontinence of urine and feces. Her constant cries were those of a lunatic or idiot. The temperature and pulse were normal for the first three weeks, then at times she would have a slight rise of temperature, when the tongue would be dry and furred.

On Jan. 16th I asked Dr. C. K. Clarke of the Asylum to see her. That day her pulse was 120 and weak, temperature 101, tongue dry; this was the worst day of her illness. Dr. Clarke looked upon the case as hysterical insanity.

During the month she was in bed she never moved the broken leg. The right leg was frequently thrown about, but so far as the affected leg was concerned, she could not have kept it quieter had her mind been clear.

I asked the nurse to put her in a sitting position, but for several days this was impossible unless some one held her there.

In the fourth week a plaster of paris splint was applied, and she was lifted out of bed, and held in a chair for a short time each day. From the end of the fourth week her mental condition improved daily until Feb. 6th, nearly six weeks after the accident. On that day I found her quite sane and the nurse said she had not lapsed for 24 hours.

Since then she has moved about on crutches daily and enjoys seeing her friends. Her mind remains quite clear.

To my great satisfaction the leg has made as good a recovery as if no mental complications had existed.

Selected Articles.

MYOCARDIAL DISEASE FROM THE CLINICAL STANDPOINT.*

By H. B. Anderson, M.D.; L.R.C.P. (Lon.); M.R.C.S. (Eng.)
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Rokitansky studied both acute and chronic inflammations of the myocardium, recognized their relationship to cardiac dilatation and rupture, and did much to advance our knowledge of the gross pathology of the condition. Virchow's work is especially important, because it included a careful study, both microscopic and chemic, of the changes in parenchymatous myocarditis. Thus, from the pathological side, diseases of the myocardium have been very carefully worked out, with a completeness of classification, a definiteness of description, and an appreciation of importance, which stands in marked contrast to the dearth of information that has been obtained from the clinical side. The pathologists have shown the etiological relationship of many other conditions to myocardial disease, but the clinician has too seldom borne this relationship in mind. In fact in probably no other important class of diseases is there such a disparity between the well established facts of the pathologist and the practical application of this knowledge by the clinician, whether it be in the management of these diseases or in teaching students their frequency, importance and means of recognition.

Considering therefore the relative importance of the tissues involved, it seems remarkable that in Allbutt's excellent System of Medicine four times as much space is devoted to pericardial lesions and nearly eight times as much to endocardial as to myocardial, and this is only a fair example of what may generally be found in text books of Medicine and special treatises on Heart Diseases.

Myocardial lesions are not only more important from the nature of the tissue involved, but also on account of their greater frequency. In this connection, it must not be forgotten that the coincident condition of the cardiac muscle is a factor of equal, if not greater, importance than the valvular

*Read before the Fifth Branch of the Michigan State Association, Grand Rapids.

lesion itself in determining the outcome of any case of valvular disease.

It is therefore unfortunate that the student of medicine should go into practice with an exaggerated idea of the importance of valvular disease, and a very hazy notion of myocardial.

Auscultation as an aid to cardial diagnosis has not proved an unmixed blessing. Properly used, with a clear understanding of its limitations, auscultation is undoubtedly of great value. But, after all, it deals with sounds or murmurs, the interpretation of which often requires the widest knowledge, the greatest care and the soundest judgment, without the exercise of which auscultation may be worse than useless—it may actually be misleading.

Huchard's contention, endorsed by Lindsay, "That since Laennec's time we have all been too much the slaves of auscultation—too much under the tyranny of murmur," must express the opinion of those who have studied the subject, not only at the bedside but in the laboratory and the morgue.

For clinical purposes, myocarditis may be divided into two broad classes, acute and chronic. From whatever causes the condition arises, or whatever the pathological cardiac changes which may be present, the important clinical manifestation is *heart weakness* or *muscular insufficiency*, and the symptoms and physical signs are practically all referable to this factor.

As ordinarily seen in practice, acute myocarditis follows one of the acute infective diseases—diphtheria, influenza, scarlet fever, typhoid fever, pneumonia, septicemia, rheumatism or even measles. The soft, pale, flabby, friable heart found at autopsy in fatal cases of these diseases has been commonly recognized by morbid anatomists since the time of Morgagni.

That symptoms do not always arise in cases of even marked myocardial involvement is not remarkable when we consider the extraordinary reserve force the organ possesses.

There are, however, good reasons to believe that the heart muscle is injured to a greater or lesser extent in every case of acute infective disease, *as an essential part of the disease*, the degree of involvement varying with the nature and intensity of the attack, its duration, the previous condition of the heart and many other circumstances connected with the individual case. In the milder grades of involvement, the case recovers without any clinical evidence of its presence, but it is of the utmost importance for the clinician in the management of these diseases to keep the cardiac phenomena in mind, not as unusual occurrences or as complications, but as an essential part of the disease. This appears the only safe rule in order to avoid consequences, in many cases, fraught with the greatest danger.

In typhoid fever every clinician has in mind the probability of intestinal ulceration and the consequent liability to perforation, and in his management of the case, takes all possible prophylactic measures to avoid its occurrence. He does this, not from the fact that perforation is of such common occurrence or that symptoms of it are present in a given case, but because from his knowledge of the pathology of the disease, he recognizes the presence of the morbid opportunity—a liability to this accident. This, I believe, is the only safe and proper clinical attitude to assume with regard to the cardiac manifestations of these diseases. Being on guard and interpreting symptoms in the light of pathological knowledge, it is unnecessary to urge the necessity for redoubled care in case where any symptoms of myocardial weakness frankly manifest themselves.

Time will not permit of my entering into a discussion of the cardiac manifestations in the individual diseases, but I shall refer to some of them again in connection with the notes of cases which have recently come under my observation.

1. About a year ago I was called to see a girl, A. M., aged 8 years, who had been ill for some days with extensive nasal and pharyngeal diphtheria. She was very ill, temperature 102 2-5, pulse rapid. Under full administration of anti-toxin the symptoms rapidly improved and the membrane disappeared. Her general condition was satisfactory and in ten days she appeared well on the way to recovery. She had been kept in quiet so far as possible and not even allowed to be propped up in bed. One morning Dr. Tweedy, of the Toronto Isolation Hospital, where she was a patient, telephoned me that the patient felt cold and looked pale. An immediate visit was paid. On examining her, I found the skin cold; she presented an extreme pallor, the pulse was very rapid, small and extremely weak, and the cardiac impulse was scarcely perceptible. The first sound at the apex was short, weak and valvular in character. In spite of measures for her relief, she died in a few hours after the onset of symptoms. This was an extreme though not unusual case, developing without any premonitory symptoms, and I know of no means by which the fatal issue could have been averted, unless by earlier treatment at the beginning of her attack of diphtheria.

In my experience, influenza is particularly liable to be followed by myocardial weakness, especially when it occurs in those elderly persons whose occupation subjects them to severe exertion. The disease is often the determining factor of muscular insufficiency in persons with previously well compensated cardiac lesions. From a number of instances which have come under my notice during the past few years, the following case, at present under my care in St. Michael's Hospital, is especially instructive.

III. A. W., paperhanger, aged 41, was referred to me by Dr. W. J. Fletcher of Toronto. Fourteen years ago he was confined to bed for eight weeks with rheumatism. No valvular lesion developed and he had no shortness of breath or other symptoms following his attack. He was in good health, following his occupation until February, 1905, when he had an attack of influenza, which laid him up for ten days. On attempting to return to work he found himself short of breath, weak and quite incapable of exertion. He continued to go about, but his condition grew steadily worse. I saw him first in November, 1905. He felt very ill, weak, had continual shortness of breath, was very nervous and had been suffering from fainting spells. The features were turgid, he had slight cyanosis of the surface of the body generally, cervical veins were prominent, breathing was of the Cheyne-Stokes type. Physical examination showed enlargement of the precardial area, apex beat in the sixth interspace, 1 inch outside the nipple, impulse very weak and diffuse. There was increase of cardiac dullness upwards, and to the right and left of the sternum. The first sound at the apex was very weak, short and valvular in character, the second sound being much more distinct than the first. No murmurs were present. The liver was greatly enlarged.

This case to me has been one of extreme interest. I believe that some chronic myocarditis with hypertrophy resulted from his rheumatism fourteen years before, thus rendering the organ more vulnerable to the influenzal poisoning, which was directly responsible for the cardiac breakdown.

IV. Myocarditis, following chorea.

E. W., aged 11 years, suffered from an ordinary attack of chorea, during which she was confined to bed for three weeks. No valvular disease developed, and apparently she made a satisfactory recovery.

September 1st, Dr. Stark was sent for. Patient had been complaining of shortness of breath on exertion and the legs began to swell. A mitral systolic murmur was now found to be present. In spite of treatment she gradually grew worse, tremendous edema of the lower extremities, ascites and edema of the lungs, with hypostatic pneumonia, developed.

I saw her in consultation on November 19th. The heart's impulse was weak, diffuse and irregular, the apex beat being out to the axilla. The whole precordium was faintly throbbing. A distinct mitral systolic murmur was present. The patient died on November 21st and an autopsy was performed the following morning. The heart showed some hypertrophy with dilatation of both sides, weight 8 ounces. The muscle was pale, very soft

and flabby. Subsequent microscopic examination showed infiltration of leucocytes and slight hemorrhage into the interstitial tissue, and vacuolation and albuminous and fatty degeneration of the muscle cells. The normal striation of the muscle had almost disappeared.

No more serious error could be made than being misled by the presence of the murmur to look upon this as a case of valvular disease. As explained by Knehl, the valvular incompetency was due to lack of constriction of the mitral orifice by the muscular band surrounding it, and possibly to changes in the papillary muscles interfering with their normal action in controlling the valves. Such examples of relative incompetency apart from valvular disease are common and, no doubt, explain many of the cases of murmurs disappearing under rest and treatment.

I wish, therefore, to emphasize the fact that the coincident condition of the myocardium is a factor of greater importance than the valvular lesion itself in determining the prognosis in a given case. In this way only can we explain the marked variability in course and the uncertainty of the outcome shown by patients with similar valvular lesions.

In the management of the acute infective diseases, therefore, the clinician should always keep the following possibilities in view:

(a) That *myocarditis* may give rise to serious symptoms either at the height of the disease, during convalescence or in after life.

(b) The *greater* danger, often determining cardiac breakdown, in persons *previously subjects of valvular or muscular lesions*, and the necessity for using all available measures to protect the heart in such cases.

(c) The great length of time which must elapse to allow of regenerative changes and consequent cure.

Chronic Myocarditis.—This condition is common and may make its appearance in various ways.

(a) Occasionally as a sequel to acute myocarditis.

(b) Most commonly as one of the manifestations of the senile heart—from sclerosis of the coronary arteries and consequent interference with the nutrition of the organ.

(c) From excessive heart strain due to occupation, general arterial sclerosis and high blood pressure; in cases of obesity.

(d) Toxic conditions, as in syphilis, gout, phosphorus poisoning, in the various anemias and cachexias, tend to chronic myocardial degeneration. Excess of tea, coffee, tobacco and alcohol, especially beer, is productive of myocardial disease.

(e) Unusual mental stress and worry is a frequent concomitant factor.

(f) Very frequently there is a combination of these conditions, as in persons who have suffered from rheumatism or other acute infective diseases, who are poorly nourished and partake of alcohol and tobacco to excess, whose occupation subjects them to intermittent severe exertion or to more prolonged laborious efforts, or in those who have undergone prolonged worry.

(g) Hereditary influences are important, some families being prone to early cardiac breakdown.

As to treatment, much of this has already been indicated, prophylaxis is of greatest importance.

After the acute infective diseases in the subjects of valvular disease or arteriosclerosis, and in advancing age, the necessity for the avoidance of severe exertion or any excess of effort; the early recognition of hypertrophy, weakening of the first sound or marked accentuation of the second aortic sound, irregularity or intermitting of pulse; undue breathlessness on exertion, etc.

The avoidance of excess in tobacco, in eating or drinking is very important; also of mental overstrain and worry.

A holiday with a change and complete rest from business, with baths, etc., often has a most beneficial effect.

Strychnine is one of the best remedies, given frequently and for long periods. Nitroglycerine and the nitrites are often of value to lower arterial tension; in some cases with cardiac asthma, morphia renders splendid service. Musser recommends pulv. opii, and I have found it very useful. Aromatic spirits of ammonia, caffeine and camphor are without danger and often useful in cases of dilatation with urgent symptoms; also oxygen inhalation. Digitalis and strophanthus may be of service, but one has to be guarded in their use. The Schott treatment where it can be properly carried out often gives excellent results.—*West. Can. Med. Jour.*

SUDDEN DEATH.

By Prof. Robert Saunby, M.D., M.Sc., LL.D., F.R.C.P.

The Church Litany contains a prayer for deliverance from the perils of battle, murder, and *sudden death.*

By sudden death is generally meant death which comes unexpectedly, or, if we may elaborate a little, we may say that has not been preceded by warning symptoms of its approach.

This prayer expresses a feeling which is widespread, yet, on reflection, as death is inevitable and must come to all of us, it is most merciful when it comes unawares and all is quickly over. As one gets to a time of life when necessarily the portion of existence left can only be short in comparison with that which has passed, the least reflective person may sometimes wonder in what way he shall make his exit from the stage on which he has played his little part, and would probably like to think that when the time comes he will not be long about it. I admire and envy my old friend and master, the late Professor Annandale, who only a few weeks ago, after a full day's work, having operated at the Royal Infirmary in the afternoon, was found next morning dead in his bed. In such a death, sudden though it be, there is nothing terrifying; he had done his duty up to the last, and lay down to rest from his labor. Why should we murmur if his sleep was that from which there is no awakening? He was æt. 68, so had lived nearly the allotted span of human life, and he went to his long home without knowing the weakness and infirmity of old age.

But sudden death raises certain civil and professional questions with which we, as medical practitioners, have to deal.

In our capacity of private medical advisers we are expected to foresee and forewarn against this danger, and, armed with the authority conferred on us by the law, it is our duty to give a satisfactory explanation when we can, and to aid the officers of justice in discriminating between deaths due to natural causes and those which are the consequences of crime. Hence we are called upon to familiarise ourselves by observation so far as opportunity is afforded us, and by reading and study which are open to all of us with those natural causes by which life may be unexpectedly ended.

Sudden death may occur—

1. In the course of acute disease.
2. In the course of chronic disease.
3. In apparent health.

We may leave out of account for the present all those

cases where death is caused by injury or shock, for, interesting as they are, they would carry us too far and exceed the limits of time at my disposal.

1.—In Acute Disease.

Death in acute disease may be tragically unexpected, and there are few circumstances under which it comes with a greater shock to relatives and to the medical attendant. Perhaps the best and commonest illustration is seen in diphtheria. I remember such a case when I was a student, and the impression then made is indelible. One of our house physicians, a strong, healthy young man, caught diphtheria in the Infirmary; he was getting better, when he sat up in bed and died suddenly. I had a similar case at the old Hospital where the patient did not sit up and every precaution was taken. There had been no evidence of heart weakness, and I had remarked on the absence throughout of serious constitutional symptoms, although the throat condition was well marked.

Such sudden deaths occur in other acute diseases, especially in typhoid fever and pneumonia, but, happily, they are rare.

2.—In Chronic Disease.

This is a chapter which might be extended to very great length if I were to enumerate all the conditions under which it occurs. I do not here include cases in which there has been no previous illness, where the evolution of the disease has been latent, those will come in the next series; but I refer to patients who are known to be suffering from some chronic disease but death is not expected, as, for example, in chronic phthisis, where a sudden rupture of an aneurysmal dilatation of a vessel in an old pulmonary cavity may cause sudden death. I remember seeing a lady a good many years ago who was suffering from fibroid phthisis, a very chronic form of the disease, which often lasts twenty or thirty years, and I had laid stress upon this favorable aspect of the case to her husband. The next day a sudden violent hemorrhage carried her off, and since then I have guarded myself in my prognosis against this accident.

In phthisis, too, sudden death may occur from embolism or from syncope, and either may cause death in cancer.

The liability of the subjects of heart disease to die suddenly is generally admitted, but it is chiefly where the aortic valves are incompetent that this occurs. The late Dr. Tilbury Fox, the well-known skin specialist, died in this way at a compara-

tively early age. He and his wife had run over to Paris for a short holiday, and while there one night he woke her from her sleep, asked her to kiss him, and died. Some pang there may have been that roused him and gave the opportunity for that brief parting, or he, too, would have been one who died in his sleep. But sudden death may occur in other forms of heart disease. I have seen a case of mitral stenosis lying quietly in bed in the ward suddenly attacked by acute œdema of the lungs, and die in a few minutes. Of the suddenness of death in angina pectoris we are all sufficiently aware.

I do not need to lay stress on the risk of rupture of an aneurysm, although it is comparatively rare; or to the possibility of death resulting from a ruptured varicose vein. But the danger of sudden death in phlebitis is not fully appreciated, or we should not have had to regret the untimely death of Sir Richard Thorne, who could not be persuaded to rest while suffering from an attack of gouty phlebitis of the femoral vein.

Death may ocur suddenly from the rupture of varicose, submucous œsophageal veins in cirrhosis of the liver, and, indeed, it came in this shape, without warning at Bath railway station to the great Dr. Todd, the apostle of alcohol in the treatment of acute disease, perhaps the victim of applying his own prescriptions inopportunely to himself.

Intestinal obstruction may cause sudden death in old incarcerated hernias, from the presence of adhesions set up by pelvic inflammation, from chronic appendicitis, from ulcer of the stomach, from impaction of a gall-stone; in all these cases, however, there are symptoms of severe abdominal pain and vomiting, so as to suggest poisoning. The late Surgeon-General Harvey, Director-General of the Medical Department of the Army in India, had suffered for years from chronic dysentery with resulting matting together of the intestines and chronic obstruction. He came home to seek advice, but was dissuaded from an operation. He reached Bombay on his return to India safely, but in the train journey to Simla was attacked by symptoms of acute obstruction, and although the abdomen was opened it was too late to save the life of one who was an ornament to the Service and the friend of everyone who knew him.

Rupture of the spleen is another frequent cause of sudden death in malarious countries, where this organ becomes enlarged, hard, and brittle, so that a blow or a fall or even a sudden effort may be sufficient to burst the capsule.

Chronic Bright's disease is accountable for many sudden

deaths by apoplexy, by epileptiform attacks, followed by coma and death, by severe and fatal dyspnœa; less common are acute œdema of the larynx and acute œdema of the lungs.

It is also well known that the lives of diabetics hang by a thread. Such a patient runs to catch a train, sinks exhausted into a seat, and dies from heart failure, or after the fatigue of a moderate walk or the shock of a small operation such as the extraction of a tooth, or some emotional excitement, is seized with abdominal pain, rapid pulse, and breathlessness, followed by coma and death. With all these your text-books have made you familiar.

We all know, too, that persons suffering from Graves' disease, from disease of the middle ear, from acromegaly, from bulbar paralysis, and from various forms of insanity are liable to sudden death, and that life insurance companies rightly refuse to take these risks.

3.—In Apparent Health.

But now let us pass before all my time is exhausted to the most startling and most tragic cases where death comes suddenly and unexpectedly to persons in apparent health, and let us consider some of the conditions in which that may occur.

When I was pathologist to this institution, a man who was walking rapidly along Summer Lane about 1 o'clock in the day, was seen to stagger and fall; he was picked up and brought into the hospital, which was only a few yards away, but when seen he was quite dead. I made an examination of the body and found nothing in the abdominal or thoracic organs to account for death, so I cut out the larynx with the tongue and the neighboring soft parts and drew them down. When I had done this I saw lying over the opening of the larynx and firmly plugging it a large piece of unmasticated beef steak, which I suppose the man was eating as he hurried back to his work, and which, being tough, he had probably bolted. Such cases are rare, but it is well to know that death may be caused quite suddenly in this way, apparently from inhibition of the heart, for mere asphyxia would be far less speedy.

Some years ago a well-known English actress went to Paris for a short holiday, and took a drive in the Bois de Boulogne; while taking tea at the restaurant by the Cascade she was seized with sudden pain in the abdomen, turned pale, and died. A post-mortem examination showed rupture of a tubal pregnancy, a fact which was suppressed, as the lady was not living with her husband, and death was attributed to "internal hemorrhage."

Brouardel relates the case of a tripe-seller, æt. 20, who fell down dead while serving a customer; both lungs were found to be riddled with tubercles, but there had been no symptoms of the disease during life.

An engineer, employed at a colliery near Rowley Regis died suddenly, and I was asked to make a post-mortem examination. He was supposed to have been in perfectly good health, and had not been absent from his work for a single day during the previous two years. I found his stomach distended with blood from a ruptured varicose œsophageal vein, and his liver in a state of advanced atrophic cirrhosis, but there was no ascites.

A man came to me in the out-patient room complaining of pain in the back; I sent him to undress, but soon after, hearing the sound of a fall, I went to him and found him dying; in a few minutes all was over. At the examination of the body we found a small aneurysm of the thoracic aorta not larger than a walnut; its posterior wall was formed by the muscles lying over the spinal column, while there was a round atheromatous ulcer in the posterior wall of the aorta about as large as a florin; the aneurysm had given way laterally, and the blood had poured into the cavity of the thorax.

A few days ago a man was walking past the General Post Office when he was seen to fall, and the policeman who ran to assist him found him dead. He was brought to the hospital. On examining the body, a rent was found in the wall of the left ventricle half an inch in length; there was atheromatous blocking of a branch of the coronary artery and fatty degeneration of the muscle supplied by this branch.

The Comte de Chambord, whom some Frenchman called Henry the Fifth, died suddenly, and at the post-mortem examination the œsophagus was found deeply ulcerated, for which no explanation was forthcoming. A less august personage, Chas. B., æt. 36, was locked up at 11.30 p.m. by the police for being drunk; his cell was warm, and he had two blankets; at 2 a.m., he had some hot coffee; at 6 a.m., he complained of feeling ill, and at 7, as he was worse, he was brought to the hospital. When admitted, he was unconscious, cyanosed, and breathed stertorously; he died an hour later. The post-mortem examination showed acute sloughing of the œsophagus, which was attributed to some corrosive poison, but there was no evidence to show that he had obtained any. Was our pathologist right, or is there, as Brouardel appears to believe, some unknown cause of acute œsophageal inflammation?—*Medical Press and Circular.*

Progress of Medical Science.

MEDICINE.

IN CHARGE OF W. H. B. AIKINS, F. A. CLARKSON AND BREFNEY O'REILLY.

The Physiological Age for Smoking.

At what age can smoking be countenanced by the physiologist and the physician? Like most apparently simple medical questions, that modest-looking query takes a good deal of answering. One thing may be said off-hand without a moment's hesitation, namely, that juvenile smoking is a bad thing from every point of view. Then, again, excessive smoking is injurious at any age, but that is implied in the condition of excess. A great deal depends on the individual himself with regard to the effects of tobacco upon his constitution. If he be vigorous, well-fed, and under good conditions of general environment, he can withstand quantities of tobacco poison that would wreck a weaker vessel. As regards the latter end of life, it is interesting to note how many veterans gradually curtail or altogether discontinue the habit of smoking. That is most likely an unconscious surrender to hidden physiological promptings, which show that the pipe or cigar is no longer smoothly tolerated by the nervous system as in days of yore. Not long ago a speaker at a Northern university conference moved that physiology be included amongst the list of subjects for a degree in Arts. One of his arguments was that divinity students thus educated would become sounder advocates of such social problems as that of temperance. Probably, he added, they would acquire much light on the heinous practice of smoking. The heart of that assembly of learned men was solely vexed by this frontal attack, and so great was the subsequent confusion that the speaker hurriedly qualified his statement by the assurance that he meant smoking by boys under fourteen. Possibly a further conference of the Scottish universities might settle the exact age at which a man might be permitted to begin smoking, and the hardly less important points as to when he should leave off that altogether unnecessary indulgence.—*Medical Press and Circular.*

SURGERY.

IN CHARGE OF EDMUND E. KING, GEORGE A. BINGHAM, C. B. SHUTTLEWORTH AND F. W. MARLOW.

Bier's Method and Ulcer of the Leg.

There is probably no common and non-fatal affection that is more troublesome to treat successfully than non-specific ulceration of the leg. The skin and subcutaneous tissues in the inner aspect of the lower third of the leg, where these ulcers are commonest, are comparatively poor in their blood supply; the part is particularly liable to small injuries; and when once an ulcer has formed, its surroundings very quickly become indurated and hide-bound from capillary lymphatic obstruction. There may or may not be varicose veins in the leg at the same time; whether such varicosity exists or not, the ulcers are commonly termed "varicose" when it is desired to distinguish them from syphilitic ulcers; probably a better adjective than varicose would be " malnutritional."

It is the malnutrition of the part which makes it so difficult to cure the ulcers. Anything which assists in promoting the better nutrition of the leg also helps the ulcer to heal. One of the simplest measures is to keep the leg raised so that the foot is on a level with the heart; the blood is then able to return by the veins with greater rapidity than it can when the leg is down; and if the patient can afford to lie up in bed for a good many weeks, or even months, there are few of these ulcers that cannot be got well, at least for the time being.

The difficulty is that the very class of persons that is most liable to malnutritional ulceration of the legs is also the class that is obliged to be up and about, seeing to household and other work. Even when a certain length of time can be spared for continuous rest in bed the patient is eager all the while to be up and about again at the earliest opportunity. The result of this is that, no sooner is the ulcer nicely skinned over again with fresh epidermis than the patient, having been in bed for six weeks or two months, perhaps, deems herself well, and the leg is used again too soon. The new-formed epidermis has not had time to become mature; and the slightest injury or excoriation causes it to ulcerate afresh; nay, even without injury, the dependent position of the leg by itself may cause recurrence of the ulceration owing to return of the original state of malnutrition in the part from stagnation in the dependent veins.

The crux of the whole question is the length of time that can be devoted to the resting of the ulcerated leg up in bed, and

anything which can bring the cure to a more advanced stage of maturity in a given space of time is bound to be a boon in the treatment of the condition.

We do not propose to deal with the ointments or fomentations or caustics that may be applied to the surface of the ulcers themselves; nor with the remedies such as calcium chloride or calcium lactate, potassium iodide, colchicum, and so forth that may be given internally. These we have already discussed elsewhere. It is our purpose to discuss to-day a simple procedure by which the rate of repair in the ulcer may be considerably accelerated during the period of rest, so that the length of time during which the patient must lie with the leg up can be considerably curtailed. This simple procedure is known as Bier's passive hyperæmia method.

The process is very easy, and it requires no special apparatus beyond an elastic bandage which is used in a way very similar to a tourniquet. A Martin's bandage is very convenient for the purpose, and it should be about three inches wide. This is applied round the leg, proximal to the ulcer and as remote from it as may be convenient. The affected region of skin should on no account be subjected to pressure; a good place for the bandage is just above the knee.

The most important point about the bandaging is the tightness with which it is done; and no absolute rule can be laid down, for one patient can bear it much tighter than another can. Broadly speaking, the bandaging has to be such that the return flow of blood has only to be impeded, not stopped, whilst the temperature of the distal end of the limb must not be lowered. The tightness of the bandage must be considerable, but yet something less than is required when, for example, venesection is to be performed. The parts beyond the bandage will swell, and become reddened; if the application is too tight the color may become bluish or even white, in which case the bandage should at once be loosened. There is a subjective feeling of tension in the parts in and around the ulcer, and the patient's sensations afford a very good clinical guide as to how tight the bandage should be. That which is most comfortable to the patient is approximately the best for the treatment, which should stop short of any painfulness at the site of the bandaging or of acute discomfort in the parts beyond.

The length of time the bandage should be left on will vary in different cases; some prefer continuous application for many hours, others periodic bandaging for short periods at a time. Probably the latter is the more convenient and comfortable in

most cases, the bandaging being applied for an hour at a time night and morning. There is no absolute need for the patients to remain in bed, at least in so far as the Bier's treatment itself is concerned, and the procedure has been successfully used in out-patients who, after having the bandage on for an hour under inspection, to see that all is well, have been allowed to go home with it *in situ,* to be left on till next day. This, however, applies to the treatment of inflammatory conditions such as whitlows and the like rather than to ulcers of the leg; for the latter, rest in bed is the ideal condition, with Bier's treatment to accelerate the process of repair.

Precisely how the treatment acts is not known. Theoretically, if it is a bad thing for the ulcerated leg to be dependent it should also be the reverse of good to produce an artificial venous stasis in the part. Practical experience shows this not to be the case, however; and the intermittent passive hyperæmia induced by the bandaging undoubtedly does a great deal of good in these cases. The procedure is very simple, and it costs very little. There can be no doubt of its value as an additional means of treating what is otherwise a very refractory disease.—*The Hospital.*

OBSTETRICS AND GYNECOLOGY.

IN CHARGE OF ADAM H. WRIGHT, K. C. M'ILWRAITH, FRED. FENTON AND HELEN MACMURCHY.

Meeting of Ex-House Surgeons.

The ex-house surgeons' meeting was held in the medical theatre of the Toronto General Hospital on Monday, March 2nd, Dr. Caven presiding. Dr. Frederick Fenton reported a case of Cesarean Section and also a case of Hydrocephalus (presenting the specimen); Dr. Boyd presented several patients whom he had operated on for mastoid disease.

The following is a short history of Dr. Fenton's case:

Mrs. Shapiro. Aet. 30. Jew; born in Russia.

Second labor, having been delivered of a dead child some years ago, after being in labor four days.

Admitted to hospital at 11 p.m. on Jan. 16, having been three days in labor, the last twenty-four hours being what she described as hard labor.

She was a pale, anaemic woman, having a starved appearance, and suffering from severe labor pains.

Her fingers were clubbed and much reddened about the matrix of the nails, and on the day following operation were found to present an infected paronychia.

The membranes had ruptured some hours before admission to the hospital, and she was greatly exhausted.

On examination the head was found at the brim of the pelvis, but not engaged; the os was fairly well dilated, and there was oozing from the cervix a material which looked and smelt like the contents of the ilium.

The presence of old scars in the perineum and of old tears of the cervix led me to suspect a recto-vaginal or cervical fistula, but this was not justified by further examination.

On examination one was at once struck with the narrowness of the antero-posterior diameter of the pelvis, not only at the brim, but throughout the greater part of its length.

The diagonal conjugate measured 8 c.m., and the sacrum was straight in its upper half, so that the normal curve of the pelvis was lost.

The child being found to be alive, the indication for section appeared to be imperative.

The chance of delivery by forceps or turning were nil, while perforation would destroy the child and not very greatly decrease the danger to the mother from the already existing sepsis.

Unfortunately, reasons other than the points in the case had to be considered in deciding between the various forms of operation, and I was forced to choose the conservative procedure.

The woman died from sepsis on the ninth day after the operation, and this result would have been made less probable by a radical procedure, had I been free to follow what was deemed best without being influenced by circumstances.

There are one or two features of the case which I would like to draw attention to, viz.:

On opening the abdomen there escaped a large amount of clear acitic fluid, which fluid proved troublesome after the operation, in that it burst its way through the wound in a few hours and continued to be discharged in large quantities for several days.

Another point is the fact that throughout the woman had a *normal* temperature, with the exception of one or two occasions, when it rose to about 100, and the day before she died, when it was subnormal, viz., 96.

After the first day or two she took nourishment and retained it, frequently complaining that she was being starved.

At first the bowels were constipated, but they finally responded to purgatives, and for several days moved well. Toward the end she developed diarrhoea.

From the first the distension was very great, and at times was most distressing. Her mind was clear throughout.

For a few days the lochia was foul-smelling, but that finally cleared up, and for three or four days before death it was without odor, red, and in all respects normal.

The child is living and well six weeks after operation.

A synopsis of three of Dr. Boyd's cases:—

1.—Roumanian, admitted to the T. G. H. on Feb. 2, 1908, complaining of severe pain behind the left ear and an aural discharge of some weeks' duration. There was a profuse purulent discharge from the external meatus, marked sagging of the post-sup. wall of the meatus near the tympanic membrane, and swelling with œdema over the mastoid process and in the adjoining part of the neck, suggesting a Bezold's mastoiditis. Temperature was normal. Operation on Feb. 3. After reflecting skin, etc., a large sinus, fully 1-2 inch square, was found over the middle and lower part of the bone, at the bottom of which was the exposed lateral sinus, covered with large granulations. No sequestrum was found. The mastoid was large, of a pneumatic type, and extensively diseased. It was thoroughly cleared, the tip removed—as a large cell at the apex was diseased. Attention was then paid to the condition of the lateral sinus. This felt soft and semi-fluctuating beneath the granulations, but in order to be reasonably sure of this the bony wall in the upper part of the mastoid cavity was removed. The whole of the descending portion of the sinus was thereby exposed—the lower by disease, the upper by design. This latter appeared perfectly healthy. The granulations over the lower part were left untouched (nature's barrier to the extension of disease). A separate piece of gauze was placed over the exposed sinus. The wound was practically left open, two stitches only being put in at the upper angle. No complications nor further extension occurred. No discharge was seen from the external meatus after the first dressing, six days later, and the wound was healed in five weeks. Bacteriological examination of the pus showed the streptococcus.

2.—Infant, 2 years old, with a history of measles 2 months ago and discharge from the right ear of 4 weeks. Advice was sought on account of a large, boggy, fluctuating swelling behind the affected ear—a sub-periosteal abscess. Operation at the T. G. H., Feb. 2, 1908. After reflecting the skin flaps, a sinus was found in the bone over the usual site of the antrum in a child of this age, viz.: above and behind the roof of the bony meatus. A probe, introduced in the sinus, went forward and

slightly downward, apparently into the aditus. It was found, however, that the dura mater was at the bottom of this sinus, and, on further examination, the antrum was found at a lower level, and in its roof a fistulous tract leading directly to the cerebral cavity. Curiously enough, the dura was not thickened, but appeared normal. The mastoid process was small and not diseased. The track of disease was evidently from the antrum, probably through the petro-squamous suture, to the cerebral cavity, and then outwards. The abscess cavity in the soft parts was thoroughly curetted and rubbed with iodoform gauze, and two-thirds of the wound closed. This part healed by first intention, the whole wound healing in 5 weeks, without complications.

3.—S. W.—First became ill Dec. 19.

Jan. 7—Entered T. G. H. Temp 103.4. Typhoid.

Jan. 13—Cough.

Jan. 18—Peculiar sensation in ears when she swallows. Hearing is much dulled. Still coughs.

Jan. 20—Complains of earache in each ear and soreness in front of each and behind the right.

Jan. 22—Slight discharge from both ears. They are being washed with normal saline. Hearing is a little better this morning. No cough.

Jan. 23—Right ear is discharging thin, watery fluid. Still tender around the ears.

Jan. 28—Temperature normal. Left ear still aches somewhat, and there is a slight discharge from the right.

Jan. 29—Left ear has no discharge and no pain. Right ear has a foul-smelling, purulent discharge, rather small in amount. Hearing is still quite defective.

Feb. 4—Ear discharges very little. Hearing is better. Ear syringed with bichloride 1-5000 and Lysol 1-200.

Feb. 5—Slight discharge from right ear.

Feb. 8—Some pain in left ear.

Feb. 9—Sore throat and stiff neck. Ear still painful and slight discharge. Still a little deaf. Temperature, 100.

Feb. 12—Ear drum punctured under gas anæsthesia. Temperature, 101.6.

Feb. 15—No pain in left ear, but it feels tender. Ear syringed with carbolic 1-80 every 4 hours. Temperature, 99.4.

Feb. 18—Mastoid operation.

Feb. 21—Wants to get up. Somewhat sore about the wound. Hurts to open mouth.

Feb. 23—Dressing. Stitches removed.

Feb. 24—Wound slightly painful.

Feb. 25—Wound painful when head is moved, but patient

feels perfectly well otherwise. Temperature has been normal since operation.

Feb. 26—Dressing.

Feb. 27—Dressing. Not much discharge.

Feb. 29—Dressing. Very slight discharge. Wound granulating from bottom and looks clean.

March 3—No discharge. Wound has almost closed.

Treatment of Contracted Pelvis.

Olshausen believes (*Berl. klin. Woch.*) it is wrong to suppose that the measurement of the conjugata vera is the vital point in contracted pelvis. First he speaks of the shape of the pelvis. In rickets the pelvis has several well-marked characteristics. The transverse diameter of the true pelvis is narrowed, the outlet is increased in size, and the sacrum is only slightly curved. It is by no means easy to determine whether the transverse diameter at the inlet is contracted or not. Complicated instruments have been devised, but as a rule one must rely on the estimate which one makes from a digital examination. Generally contracted pelves are even more difficult to diagnose exactly than rachitic or flattened pelves. He discusses several points in connection with this last-named form, and points out that the conjugata vera is rarely less than 8 cm. (about 3 in.). Next he turns to the mechanisms of labor with contracted pelvis. In flattened pelves the head usually lies transversely at the inlet, the forehead being lower than the rest, and the anterior portion of the parietal bone presenting. In generally contracted pelves the occiput generally lies in the cavity of the inlet, and the sagittal suture tends to correspond with the antero-posterior diameter. When the posterior portion of the parietal bone presents in high degrees of flattened pelvis, one has every reason to anticipate great difficulties. At times one may improve matters by placing the patient in a more favorable position. The operative treatment consists in one of the following: Forceps, prophylactic version, perforation, Cesarean section, and division of the pelvis. He considers that the forceps should only be used in contracted pelvis cases with care and premeditation. The forceps will not correct a faulty position of the fetal head; they will deliver only by brute force. If one decides to put the forceps on when the head has not yet engaged at the inlet, one must exercise great care, and the trial must be a short one. If after from six to eight tractions no progress has been made, the forceps should be taken off and perforation should be performed. Next he comes to version. There is no doubt that the after-coming head will enter the pelvis in a more favorable position than the presenting head. But one must not forget that the after-coming head has far less

time to mould itself, and that the gain of obtaining a favorable diameter is largely counterbalanced by the want of adaption of the head to the shape of the pelvis through which it has to pass. For this reason far fewer living children are born after version than after the presenting head. Prophylactic version may be carried out when the degree of contraction is moderate. Good chances of success are only present when the os is fully dilated and the membranes are still unruptured. While the author does not consider version as a good method for the fetus, he realizes that it saves the maternal parts from excessive pressure. Perforation and cranioclasia are indicated when the fetus is already dead, but he considers that it should only very rarely be performed on a living child. He dismisses Cesarean section in a few words, since he has so frequently in other places written on this operation. The mortality has, thanks to the work of Saenger and others, been reduced to from 4 to 5 per cent. Porro's operation need not be considered any longer. He briefly describes the method he follows in performing this operation. With regard to pubiotomy (hebotomy) or symphysiotomy and their modifications, he points out that the technique of these pelvis-dividing operations has not yet been perfected. The chief dangers are hemorrhage, fistulæ, and tears into the lateral or anterior vaginal wall, with suppuration and general infection following. The indications for these operations have not yet been definitely settled, and while he thinks that we are not likely to be able to avoid the dangers accompanying these operations, he feels inclined to believe that pubiotomy will continue to be recognized as a standard obstetrical operation. The technique and indications must be fixed by those in charge of lying-in institutes.—*Brit. Med. Jour.*

Hydramnion: Is Abdominal Puncture Justifiable?

Nijhoff (*Zentralbl. f. Gynak.*), in relating an instance in his own experience before a medical society, turned attention to several questions which were afterwards discussed. In his case of hydramnion it was situated in the upper ovum in a twin pregnancy. He tapped the upper sac by simple puncture, without making an incision through the parieties. Scarpa and Petrus Camper had recommended puncture of an hydramnion in the eighteenth century, and in the nineteenth Schatz had spoken approvingly of the practice. Nijhoff limits puncture to twin pregnancies where the dropsical amnion cannot be reached from the vagina. With aseptic precautions puncture is not dangerous, and there is little if any fear of hemorrhage, as the minute track made by the needle closes rapidly.

LARYNGOLOGY AND RHINOLOGY.

IN CHARGE OF J. PRICE-BROWN.

Partial Occlusion of both Anterior Nares by a Congenital Cutaneous Web. By George K. Grimmer. *Jour. Lar., Rhin. & Otol.,* April, 1908.

The patient, aged 32 years, had suffered all his life from severe nasal stenosis. During the night-time this usually became complete; and during active exercise and running, he had always been a mouth breather. There was no history of purulent rhinitis.

Examination revealed a cutaneous membrane situated in the lower half of the inner end of each vestibule. The membrane was thin at its upper extremity, gradually thickening to about one-quarter of an inch at its base.

On the right side, an incision was made on the outer side of the web down to the base of the membrane, completely severing its attachment to the external wall; on the inner side, also, a similar cut, separating it from the septum. Then the flap was bent back and sutured to the floor of the nose by a horse hair stitch.

On the left side, the membrane was removed by electro-cautery operation.

On both sides the result was all that could be desired.

Septal Perforations: Their Closure by Plastic Operation. Chevalier Jackson, *Medical Record.*

The writer believes that the enlarging of a septal perforation in order to stop "whistling" is unjustifiable, as small perforations are curable by operation. His method of operating is the following: Cocaine and adrenalin are first freely applied. Then a long tongue-shaped flap, with its base anteriorly, is made of the entire thickness of the inferior turbinal tissue, the incisions from before backwards being parallel to each other. The flap must be wider and longer than the perforation. Then, the edges of the perforation are freshened with a knife, the flap drawn forwards, and with its raw face toward the cavity, the flap is sutured in position with silkworm sutures. A small perforation may be closed with the one operation, but a large one may require a similar operation upon the opposite side, after the first one has consolidated. In due time the basal attachment is severed and treated as a synechia.

Spirographs of Nasal "Breath Pictures." Wyatt Waigrave, *Lancet*, January, 1907.

The method of testing the comparative freedom of the two nostrils by breathing upon a smooth, polished surface has not received the attention it deserves, on account of the difficulty in obtaining a satisfactory material. Slate, glass and polished metals have all been found wanting; but the writer has used vulcanite with a medium polish very advantageously. It gives a reliable and faithful image.

The plate is placed horizontally on the upper lip, half an inch below the nostrils. Then one short and steady expiration makes a well-defined steam impression. The subsequent evaporation gives reliable and striking evidence of the comparative potency of the two nostrils.

The picture may be temporarily fixed by lightly powdering it with calcined magnesia or pulverized starch.

Retention of an Iron Bolt in the Maxillary Antrum for Four Years. J. O. McReynolds, *Laryngoscope*, March, 1908.

The patient was an electrician, 36 years old. Four years previously, while romping with a boy, he was thrown forcibly against the lock of a screen door, inflicting a wound along the infraorbital ridge, but without producing any disturbance of the eye. The wound in the soft tissues was closed with four stitches. The healing was uneventful and there was no purulent discharge. Two years later the patient suffered from facial neuralgia on that side, but it soon passed away.

After the accident it was discovered that the screen door lock had unaccountably disappeared.

After a while the two posterior molar teeth on the injured side became loose, and the patient extracted them with his fingers, when he discovered a hard foreign substance occupying the cavity thus made. By and by, through the same opening, he fished out the missing lock, after its lodgment in the antrum for four years. It was an iron bolt, one and five-eighths inches long and three-eighths of an inch in thickness. The case illustrates the high degree of tolerance which the maxillary antrum will sometimes endure.

A Tonsil Composed of a Mass of Papillomata. A. N. Tweedie, *Jour. Lar., Rhin. & Otol.*, April, 1908.

This pathological specimen was exhibited owing to its extreme rarity. When *in situ*, this tonsil and its fellow looked like a

pair of big sea anemones with pink fringes interlacing across the middle.

A similar tonsil was shown many years ago to the Toronto Medical Society by H. T. Machel, being exhibited on that occasion also as a *rara avis.*

A Case of Fenestration of the Anterior Pillars of the Lances. Watson Williams, *Lancet,* Jany., 1908.

This case was supposed to be congenital. The bilateral fenestrae were symmetrical; there were no cicatrices; the margins were smooth and even. The posterior pillars were free from fenestration; yet the palate-pharyngeus muscles were collected into distinct bundles on each side, with only a thin layer of mucous membrane separating them from the lateral walls of the pharynx.

A second possible explanation was, that the four thin mucous membranes were excellent at birth, but that the two weaker ones were destroyed by an attack of scarlatinal angina, which occurred in early life.

Treatment of Innocent Laryngeal Growths by Galvano-Cautery. A. Wylie, *Lancet,* November, 1907.

The writer enumerates nine advantages in this method of treatment as follows: 1. That very minute growths can be permanently obliterated. 2. That small vascular growths can be removed without the risk of hemorrhage. 3. That it is far superior to chemical caustics. 4. That the technique is reliable and precise. 5. That the whole operation is in view of the surgeon, which is not the case with the forceps. 6. That small sessile growths on the mesial surface of the cords are more thoroughly treated than by the forceps. 7. That stumps left by the use of other instruments can be obliterated by the cautery. 8. The galvano-cautery cuts off the blood supply and thus kills the growth. 9. That it diminishes the liability of local infectivity of papillomata.

Two Cases of Papillomata in the Larynx in Children Treated by Killian's Direct Method. Van del Wildenberg, *La Presse Oto, Laryngologigue Belge,* August, 1907.

1. A child, aged seventeen months, was suffering from laryngeal stenosis and aphonia. On inserting Killian's tube spatula, under general anesthesia, two papaillomatous growths were found. Both of them were successfully removed by the direct method.

2. A child, aged eighteen months, had been aphonic for a year. There was much dyspnoea and some bronchitis. Similar procedure was followed to that of the former case, but during the manipulations tracheotomy required to be done. The larynx was full of papillomata. These were ablated at different sittings. Ultimately the child did well.

The difficulties encountered in young children are due to the small size of the larynx, and the shortness and softness of the epiplottis. Cocaine and adrenalin are not very safe for infants, and the author prefers to operate without their aid under light, general anesthesia.

OPHTHALMOLOGY AND OTOLOGY.

IN CHARGE OF J. T. DUNCAN.

A very valuable Review of the Oculists Records for Ten Years at the Ohio State School for the Blind, by J. E. Brown, is published in the *Ohio State Med. Journal.* It covers a great deal of ground, but is of special importance in regard to ophthalmia neonatorum.

In 10 years 521 pupils were admitted to the school. Of these, blindness was due to the disease just mentioned in 93 cases. Now, as ophthalmia neonatorum is preventable, it is a public scandal that so many boys and girls should be allowed to become blind from this cause.

The author says:—It is not in the scope of this paper to take up the treatment of ophthalmia neonatorum, but it would be a failure to do our duty if we neglected to emphasize to the fullest the importance of anticipatory and early treatment of these cases of ophthalmia which appear at times where the physician least expects them.

How best to disseminate information that will diminish the percentage of preventable blindness is a question that has long been under consideration. The work of the committee on ophthalmia neonatorum of the American Medical Association is no doubt to bear good fruit. For the last report of the state institution, at the suggestion of the superintendent, I prepared a page for insertion, slightly modified from a form gotten up by Priestley Smith, to read as follows:

"PREVENTION OF BLINDNESS

From Inflammation of the Eyes of the New-Born—Advice to Mothers and Nurses.

"It cannot be too widely made known that many persons are

blinded every year by diseases that are preventable and curable. The most destructive of these diseases is the ophthalmia of newborn infants. Nearly one-fourth of the present pupils of this Institution owe their blindness to this cause, and the same high proportion has been found to obtain in other schools for the blind. It is fair to say that in nearly all of these cases the eyesight might have been saved by proper treatment at the commencement of the disease; the disease usually arises through ignorance of the danger and consequent delay in obtaining medical treatment. Delay is dangerous, and in the case of a newborn babe the parents or nurse must not wait until the symptoms of inflammation have become severe, but must give the case most careful attention whenever any signs of inflammation present themselves.

"This form of ophthalmia is due to the infection of the baby's eyes with irritating material during or very shortly after birth. About the third day after birth—in some cases a little earlier, in others a few days later—the baby's eyelids become swollen, and a yellowish secretion is found forming and discharging from the eyes. This is the sign of danger. Skilled medical advice should be obtained without delay. In the meantime the baby's eyes should be cleansed in the following way:

"Place the baby on its back with a cloth under its head; separate the eyelids gently with the thumb and finger, and with a bit of fresh absorbent cotton or a soft, clean bit of cloth, drip warm water freely into the eyes, moving the lids gently over the eyes, so as to wash away as thoroughly as possible every bit of the secretion that has formed. This should be repeated hourly, or in cases of much secretion, half hourly, until the services of a competent physician have been secured.

"The laws of the State of Ohio recognize the importance of this, and require the nurse, midwife or person in attendance upon the infant, to report to a licensed physician within twenty-four hours after it has been noticed, the fact that this inflammation exists, and failure to do so is punishable by fine or imprisonment, or both. Neglect of early treatment may result in blindness within a fortnight."

Ophthalmia neonatorum is the most prolific cause of blindness in the class of preventable. It seems to me the subject is of enough importance that in every case of obstetrics, when not under the daily notice of the physician, a printed slip should be left in the home or at the bedside of the parturient, calling attention to the destructive nature of inflammation of the eyes of the newborn occurring any time within ten days or two weeks

after birth, and the necessity for at once calling the attention of the physician to the same. Not only this, but we must emphasize the fact that this inflammation is nearly always due to a gonococcus infection, and the attending physician should not place reliance on use of a boracic acid solution alone, but remember that a more active agent, preferably a silver salt, is called for to combat the disease and to reduce the danger of disastrous results."

(We are informed that no such law exists in Ontario. We trust that the Medical Council will see that such a law is passed—and enforced.)

Examination of Students' Eyes.

W. C. Posey and R. T. McKenzie, Philadelphia (*Journal, A. M. A.*, March 23), describe the methods and results of the examination of the eyes of 883 students of the University of Pennsylvania during the college year of 1905-06. So far as known, the University of Pennsylvania is the only degree-conferring institution in which such examinations are systematically made.

The principal point of interest brought out is the effect of study in increasing myopia, for the statistics showed an increase of about 2.5 per cent. of myopia for each of the four years of college life.

L. Williamson (*Med. Herald*) has some good ideas on Squint in its Relation to the General Practitioner. Three-fourths of the cases begin before the fourth year of a child's age. If allowed to go on without treatment the deterioration of sight is rapid in the squinting eye. Claud Worth has proved that a poorly developed "desire for binocular vision" or fusion faculty, is the cause of squint, but this so often depends upon a difference in the refraction of the two eyes, corneal opacitus, etc., that they may play an important part in the causation of squint. The first thing to be done then, is to correct existing refraction errors, and in many cases the wearing of properly adjusted glasses is all that is necessary to bring about parallelism of the visual axis. The author insists that no child who squints is too young to wear glasses, and says he has used them on children younger than two years of age. He estimates the refraction under atropine.

If the squint is an old one and amblyopia is present, steps should be taken to exercise the deviating eye. This is done by occluding the sound eye, either with a blinder placed over the glass, an eye pad, or by instilling atropine into the better eye. By occluding the sound eye the little patient is forced to use his amblyopic eye all the time, and by instilling atropine the ac-

commodation is paralyzed and he is forced to use his deviating eye for all near vision. Under this treatment the vision in the amblyopic eye usually improves rapidly, provided the squint is not of too long standing, and a normal vision in an eye formerly barely able to count fingers is not an uncommon result if the treatment is carried out conscientiously. In cases which have existed for some years, however, results are not so satisfactory and, though some improvement in vision may be obtained, binocular vision is rarely accomplished and it is these neglected cases which were "too young yet for treatment," or "waited to grow out of it," that have useless, practically blind eyes even though the deformity be corrected by operation—another plea for the early treatment of squint.

Hand in hand with exercise of the amblyopic eye should be given exercises for the development of the fusion faculty. By means of a stereoscope, or, better still, an amblyoscope which can be adjusted to any angle of squint, an effort is made to increase the desire for binocular vision and ability to fuse images. These exercises require great patience on the part of the physician and some assistance on the part of the child. They are not applicable to babies therefore, but with perseverance they can be practiced on quite young children and the results obtained are usually sufficiently good to recompense one for the trouble taken.

PEDIATRICS.

IN CHARGE OF ALLEN BAINES AND W. J. GREIG.

The Tuberculin Eye Test. *Archives of Pediatrics*, February, 1908.

During the past year a great advance has been made in the early diagnosis of tuberculosis in children through the adaptation to the conjunctiva of the tuberculin skin inoculation. Calmette conceived the idea of simply dropping a solution of tuberculin into the conjunctival sac, and demonstrated his method before the Academy of Sciences, Paris, in June, 1907. He uses a watery suspension of dried tuberculin, which has been precipitated by 95 per cent. alcohol. One drop of a 1 per cent. solution freshly prepared is dropped into the conjunctival sac of one eye, being sure that there is no conjunctivitis or any other affection. After three or five hours congestion appears and the conjunctiva becomes bright red and swollen. By-and-bye a slight fibrinous exudation appears. Congestion and injection increase, the fibrinous exudate becomes more abundant and gathers in

threads in the lower conjunctival sac in about six hours. The reaction is at its height in from six to ten hours. The patients have no pain and only slight discomfort. There is no chemosis and no elevated temperature. The opposite eye is used for comparison. After eighteen hours in children and from twenty-four to thirty-six in adults the congestion lessens and soon disappears.

There is no reaction (or, at most, a slight redness) in patients who do not harbor the tubercle bacillus. The reaction also fails in those in the last stage of tuberculosis, in anaemic, enfeebled or moribund patients and in children under nine months of age. The reason of this is that the reaction is not simply the result of an irritation of the locality by the tuberculin, but is an evidence of the power of the body cells to produce an antagonizing substance, which, in turn, shows itself at the site of the inoculation.

Careful testing the world over has given uniform and satisfactory results. When the reaction occurs it means that the patient *has* or *has had* recently in his body active tubercle bacilli. In infants and young children a positive reaction usually means tuberculosis.

This diagnostic method will prove of the greatest value to the profession, and especially to pediatrics, by assisting an early diagnosis in obscure cases. Cases of latent tuberculosis, of lymphoid tuberculosis (bronchial, cervical, or mesenteric) and of tuberculous meningitis can now be diagnosticated early.

Some Points in Infantile Tuberculosis. *Archives of Pediatrics*, September, 1907. Holt.

1st. Frequency and mode of infection in infantile tuberculosis.

Its frequency has not been fully appreciated because we do not look for it thoroughly. More careful application of the means at our disposal has made possible the frequent recognition of the disease and has emphasized the fact that pulmonary tuberculosis is a very common disease in infants.

The means referred to are (*a*) a systematic search for the bacilli, and (*b*) the tuberculin test.

During 19 months ending May 1, 1907, 67 cases of pulmonary tubercle were treated in the Babies' Hospital, 62 of these being infants under 2 years of age and 15 under 6 months. The diagnosis rested on finding the bacilli in the sputum in 54 cases, upon post-mortem findings in 10; one had tubercular meningitis, the bacilli being found in the fluid drawn by lumbar puncture; one reacted to tuberculin, and one had typical clinical symptoms of pulmonary tubercle.

In only one case was there any consolidation of the lungs present, and in nine case there were no pulmonary signs whatever, the infants having been admited for other conditions.

How to obtain the sputum in infants? The method at present folowed is to excite a reflex cough and then catch any sputum that appears on muslin or gauze. Swabs prepared as suggested are ready at hand, and when the nurse notices a paroxysm of coughing the child is picked up and an attempt made to get the sputum. Inversion during a paroxysm is another method.

The effect of hereditary influence. For the past year it has been usual to inquire into the family history of all children admitted, and if there was evidence or suspicion of tubercle a careful search was made for the bacillus.

The result of this routine was surprising. If one parent was affected, the bacillus was usually found, and in a few cases where they were not found a positive reaction was given by tuberculin.

The relatively insignificant and infrequent intestinal lesions seen in tubercular children is rather surprising when we consider how often tubercular sputum is coughed up and swallowed.

This tends to confirm the suspicion that direct contagion rather than the taking of food is the chief cause of infection.

2nd. A study of the cerebro-spinal fluid in tuberculous meningitis.

In the past 14 months, 42 cases of tuberculous meningitis have been treated in the Babies' Hospital, in every one of which the tubercle bacillus was found in the spinal fluid.

Technique.—The fluid withdrawn is received into several tubes, as the bacilli are more apt to be present in that which is drawn last. The bacilli are not numerous, and some time may be needed to find them.

The bacilli are more numerous late in the disease than early, therefore late punctures are best.

The fluid is allowed to stand in the tube for 12 hours. If a film forms on the top the bacilli will usually be found entangled in its meshes. The film is stained as usual for the T. B. If no film forms the side of the tube is scraped with a platinum loop. If not found in that way, the fluid is centrifuged. The chances of finding them are increased if a drop or two of blood is added to the fluid, which is best done at the time of the puncture.

Another procedure sometimes successful is to superimpose drops on a slide. One drop is put on a slide and allowed to dry, then another is added and allowed to dry, etc., etc. Occasionally bacilli are found in this way when they are very scarce.

Study of Osteo-Myelitis in Children by the X-ray. *Archives of Pediatrics,* July, 1907. By Thos. Morgan Rotch, of Boston.

The accompanying radiographs illustrate what has been said—(radiographs are given).

Case 1—Plate I.—Nine years old. Shows one of the earliest manifestations of osteo-myelitis. The child was kicked on the tibia two days before being seen. Radiograph taken on the third day and showed an increased radiability of bone below the epiphyseal line of the tibia, and below this a slight boggy periosteum recurring down the whole length of the tibia, and evidently showing an exudation of fluid below the periosteum.

Case 1—Plate II.—Same case. Plate shows proliferation of the periosteum, with formation of sequestra.

Case 2—Plate III.—Ten-year-old child, entered the hospital for rheumatism; symptoms referred to the knee-joint, where there was swelling and tenderness, but nothing localized in the lower end of the femur. Radiograph showed increased radiability of the diaphysics of the femur, with proliferation of the periosteum. Osteo-myelitis of the lower end of the femur was present.

Case 3—Plate IV.—Five-year-old child, with swelling, pain and limitation of motion about the hip joint. Sent to the hospital with a diagnosis of tuberculosis of the hip. Radiograph showed an infiltration, with abscess formation resulting from infection of the neck of the femur, with proliferation of the periosteum midway between the greater and lesser trochanter and the epiphyseal line. Also an area of increased radiability.

Case 4—Plate V.—Twelve years old. The plate shows the permanent results of acute osteo-myelitis of the femur. Case was treated for tuberculosis of the hip.

Comment.—Where the diagnosis is not clear, the rays should be used. They permit a perfect understanding of the case, and tell us whether an operation is needed or not.

Editorials.

HONOR TO DR. WALTER B. GEIKIE.

At a large gathering of the members of the Toronto Academy of Medicine in the Medical Building of the University of Toronto, a life-sized portrait in oil of Dr. Walter B. Geikie, formerly Dean of Trinity Medical College, was presented to that gentleman.

Dr. Geo. A. Bingham made the presentation on behalf of the graduates of Trinity Medical College. In his address he referred to the 51 years of service of Dr. Geikie in the teaching of Medicine. He started his career as a teacher of Medicine in 1856, when he became one of the lecturers in the Medical Faculty of Victoria University. In 1860 on account of poor health he removed to Aurora. He soon acquired a large practice in the Aurora District, but at the same time continued his lectures in Toronto. He was appointed Professor of Anatomy of Victoria University in 1869. He resigned this position in 1870, and was one of the principal organizers of Trinity Medical College, which was established in 1871. He was Professor of Medicine in that Institution, and became its Dean in 1877. He occupied this position until the amalgamation of this College with the Faculty of Medicine of the University of Toronto in 1903.

Dr. Geikie in reply spoke as follows:

Mr. President and Gentlemen,

I accept with much pleasure the portrait just presented to me by Dr. Bingham on behalf of the Graduates of Trinity Medical College in such kind and pleasing terms, representing the more than warm feelings entertained towards me personally, by the Graduates of my old College. Fifty-one of the best years of my life were spent, as an earnest Medical educationist. Thirty-two of these, from April, 1871 till June, 1903, were specially devoted to the founding—establishing on as firm a foundation as possible—and building up, of Trinity Medical College, with all the energy I possesesd, ever keeping in view, and promoting, as far

as was in my power, the best interests of every student who entered the College during that long period.

I therefore appreciate this presentation, coming from her graduates, very highly. It vividly recalls many past and most pleasant years—years to me of continuous delight in daily meeting my classes. With all my heart I thank every graduate, who has had a share in this presentation, who was as loyal to his College as I was, and who now cherishes as sincerely as I do, her glorious memory.

I regard this presentation as a fresh and marked evidence that the hearts of our graduates continue to beat, as my own does, with mingled pleasure and pride as we think of the magnificent work Trinity Medical College did for Practical Medical Education during the long and useful years of her existence. No wonder that my whole heart was given to promoting and stimulating so great and so grand a work. It is, however, and I think our graduates will all agree with me, very largely, perhaps chiefly, to commemorate the glorious and long continued usefulness of our College, that this presentation is now made. The numerous high positions our graduates occupy where they are practising their profession and the eminence attained by so many of them, in Canada and elsewhere, bear testimony stronger than any words of mine can do, to the excellence of the professional training they received within her walls.

I may here mention, as illustrative of the fact just stated, the well known names of Professor Alexander H. Ferguson, of Chicago, and L. Teskey and G. A. Bingham, of Toronto, who with many others are eminent as Surgeons, and did time permit, the names of many might be given who are distinguishing themselves in all the various branches of the Profession in Canada or in other countries.

It is not surprising, therefore, that with hardly an exception, they are as loyal to the memory of their College, and that her name is, and always will be, as dear to them as it is to me. Great and long continued as my work in connection with the College was, the general success of her graduates has always been to me an inspiration and a joy.

In this connection I have only one regret, and one wish—the regret is, at my not having done more than I did for my College and for her students. The wish is, that, what I did do had been done very much better.

A College like ours was worth the labor of many a life, as her teaching was a blessing to the men she taught—a credit to our City and Country, and a boon to the public who require and deserve to have the very best and most practically taught medical men we can produce sent out to practise their profession—men who are capable of successfully coping with the frequent and great responsibilities so often met with at the bed-side.

While to-night my remarks have necessarily referred to my own College and her graduates only, it goes without saying, that I entertain no feelings other than those of kindness and sympathy towards all well conducted medical Colleges which now exist, or which may hereafter be established amongst us, and nothing pleases me better than to hear of their full success.

Gentlemen, I again thank you for the portrait, and have pleasure in presenting it to the Toronto Academy of Medicine.

WALTER B. GEIKIE.

Toronto, April 7th, 1908.

THE AMERICAN SOCIETY OF TROPICAL MEDICINE.

It is probably not known to the majority of the physicians in Canada that there is on this continent the Society of Tropical Medicine. The fifth annual meeting of the American Society of Tropical Medicine was held in the Johns Hopkins Hospital, Baltimore, March 28th.

We are told by the *New York Medical Journal* that in the five years of its existence this Society has proved the centre for the distribution of information about tropical diseases, and has acted as the rallying point for the increasing number of medical men returning from the tropical climates of the world.

At the recent meeting in Baltimore, Mr. D. E. Lantz, of the United States Department of Agriculture; Dr. F. F. Russell, of the Army Medical Museum, and Dr. Terry, of the Rockefeller

Institute, read papers and gave interesting demonstrations. There were present about 100 members and guests.

The *New York Medical Journal*, in its comments, expresses the opinion that the work of this Society is interesting not only to physicians and sanitarians returning from the tropics, but also to all medical practitioners in the lower austral zone of the United States, which comprises North and South Carolina, Georgia, Florida, Alabama, Mississippi, Arkansas, Louisiana, Texas, Arizona, New Mexico, and Southern California. Malaria exists to a greater or less extent in all these districts.

THE CANADIAN MEDICAL ASSOCIATION.

To those who are taking part in the Ontario Medical Association, the announcement that the Canadian Medical Association would be held from June 9 to 11, came as a surprise and somewhat of a shock. Many who desired to work for both meetings find now that they can practically do nothing for the Ottawa meeting.

We understand that the local Committee of Arrangements at Ottawa understood the situation, and chose the dates named with considerable regret, but they found it impossible for certain local reasons, as for instance, meeting of conventions, the Ottawa Exhibition, etc., to select a later date.

We are glad to learn, however, that a fair number from Toronto and Western Ontario will attend the meeting, and assist in making the different sessions interesting.

The meetings in Ottawa have always been good. That city is the capital of Canada, and, therefore, a fit place for such meetings. The profession of Ottawa, with the support of physicians in neighboring towns, have always furnished good programmes, and have always entertained the visiting members in a most hospitable way. The charming personality of the President, and his extensive acquaintance with physicians in all parts of Canada, ought to help to increase materially the members in attendance.

We learn from the Secretary that there will be two chief

sections, General Medicine and General Surgery, and in addition to these there will be one session each for the following sections, all of which will meet at one time: Mental Diseases—Chairman, Dr. W. H. Hattie, Halifax; Secretary, Dr. J. C. Mitchell, Brockville. Eye, Ear, Nose and Throat—Chairman, Dr. Birkett; Secretary, Dr. McKee, both of Montreal. Public Health—Chairman, Dr. C. A. Hodgetts, Toronto; Secretary, Dr. Law, Ottawa. Obstetrics and Gynecology—Chairman, Dr. F. A. Lockhart, Montreal. Pathology—Chairman, Dr. W. J. Connell, Kingston. General Medicine—Chairman, Dr. J. T. Fotheringham; Secretary, J. A. MacKenzie, both of Toronto. Military Surgery—Chairman, Dr. G. Sterling Ryerson, Toronto; Secretary, Dr. Legatt, Ottawa.

The Address in Medicine will be delivered by Dr. Risien Russell, of London, England. The place of meeting will be in the Parish Hall, of St. George's Church, on Metcalfe Street, the Racquet Court and the Carnegie Library.

Further particulars as to railway arrangements, etc., will be given by the Secretary in a circular letter early in May.

TORONTO WATER.

"Truth crushed to earth will rise again," or, as another famous author says, "Truth is like a football. You may kick it about all day, and it will be just as round and full as ever in the evening." Toronto water has done considerable damage of a physical kind, and may do more. But we did not expect that the CANADIAN PRACTITIONER would live to see the professional career of two distinguished bacteriologists disappear, even for a brief moment, beneath its none-too-pure stream! Extreme confusion of thought on the part of the Mayor and aldermen led to their confounding Casandra with Shuttleworth, and another name that shall be nameless with somebody else. They think that you can avert typhoid by ignorance, and that what people do not know or cannot see cannot harm them! This criticism of public servants who do their work faithfully and well, just because they are doing it faithfully and well, is a blow at public

health, and, what is worse, at public morals. Where is Dr. Sheard? Could he not advise the Mayor and aldermen better? The name of this country is Canada, not Russia or Patagonia. We are glad to see the independent stand of the Academy of Medicine. They do well to bestir themselves about this matter, and they must fight on until Toronto has a first-class slow sand filtration plant to give the citizens pure water, and then fight on still until Toronto's sewage is disposed of in a manner worthy of a civilized community.

THE FEEBLE MINDED IN ONTARIO.

At the request of the Ontario Government, Dr. Helen MacMurchy, of Toronto, has made a careful inquiry into the history and present condition of the feeble minded in Ontario, with the view of determining the best methods of caring for them. Dr. MacMurchy has forwarded to the Hon. W. J. Hanna, the Provincial Secretary, two very interesting and important reports.

From these we extract some of her conclusions, as follows:

"The only satisfactory method of dealing with the problem of the feeble minded is to recognize mental defect in children, training them, and giving them all through life the care and supervision that will enable them to earn at least a part of their living, and protect them from the crimes and evils that threaten them in the outside world. Special classes in the Public schools and special institutions for those needing permanent care are required for these.

"Where special classes have been tried in Great Britain, on the continent of Europe, and in the United States, it is found that more than two-thirds of the children who are in them are seriously defective mentally, and will always be dependents. From the special schools then, as a rule, they are taken to a special institution as their permanent home. These children should be taken charge of about the age of six or seven. Some of them can be taught to read, write and do arithmetic. A part of their time should be spent in learning useful trades and occupations. As they grow older they should be treated somewhat

differently, and any of them who can act as helpers, attendants and members of the staff of the institution should be placed in these positions, but the really feeble minded should never be allowed to go out into the world. No training or supervision will ever change the defective mind into a normal mind.

"It is always to be remembered that in providing for the care of the feeble minded the Government and the people are not taking up a new burden. We pay the cost of their maintenance now, while they should pay the cost of their own way partly or wholly by working under supervision. The jails, the Mercer Reformatory, the hospitals, the refuges, and the county poor house have a number of feeble-minded persons as inmates."

THE CANADIAN MEDICAL ASSOCIATION AND A FEDERAL DEPARTMENT OF PUBLIC HEALTH.

At each of the last six annual meetings the Canadian Medical Association has discussed the advisability of having a separate Department of Public Health created by the Dominion Government. Our readers will remember many of the resolutions and reports of committees which have previously been published. Among those who have taken the most active interests in the subject are Drs. E. P. LaChappelle, R. W. Powell, T. G. Roddick, I. H. Cameron, O. M. Jones, Hon. Senator Sullivan, and others.

At the last meeting of the Association, held in Montreal, the special committee on Public Health Department was requested to interview the Government at Ottawa. In accordance with such instructions the committee presented a memorandum to the Prime Minister and the Honourable the Minister of Agriculture, March 3rd, 1908. In this memorandum it was pointed out that during the last decade there has been an increasing demand for governmental recognition of the importance of public health. In England they are moving for a Minister of Public Health. In the United States the Marine Hospital Service has been enlarged into a Public Health Service. The intention of such a department would be the consolidation within it of those matters concerning public health. Among the sanitary

and public health subjects now scattered over several departments, that should be grouped together in a Department of Public Health, may be mentioned the following:

From the Department of Agriculture:—1. Sanitary advice of the Dominion Government. 2. Quarantine. 3. Leprosy. 4. Public Health Works Act. 5. Health of animals. 6. The sanitary part of consensus. 7. Vital statistics.

From the Department of the Interior:—8. Medical side of immigration affairs. 9. Medical side of Indian affairs.

From the Department of Marine:—10. Marine hospital.

From the Department of Inland Revenue:—11. Adulteration of foods and drugs.

Additional:—12. Supervision of sanitary matters in the territories which have no organization corresponding to a provisional Board of Health. 13. Sanitary direction of the service of protecting international waterways. 14. Sanitary supervision as to tuberculosis. 15. National bacteriological laboratory.

We learn from the interesting pamphlet issued by Dr. George Elliott, the general secretary, under the direction of the committee, that the Prime Minister and the Minister of Agriculture were very much interested in the reports and addresses of different members of the committee in support of the same.

Hon. Mr. Fisher, in response to the query of Sir Wilfrid as to whether it were feasible, stated that in his opinion it was, but he thought he could foresee some difficulties in the way of an immediate reorganization and consolidation of the different medical services of the Government.

New York Women's State Medical Association.

The Women's Medical Societies of Rochester, Buffalo and New York City have organized a State Medical Association, which held its first meeting in Rochester last month. One of the most interesting papers was that on "The History of Women in Medicine," which was given by Dr. Martha Wollstein, of the Rockefeller Institute of Research in New York, and Pathologist of the New York Babies' Hospital. This organization will, no doubt, do an excellent work, as do simlar societies in Great Britain, notably the Association of Registered Medical Women.

But women in the profession in Canada who are members of

the British Medical Association, the Canadian Medical Association, the Ontario Medical Association, the Academy of Medicine (Toronto), and other bodies, have frequently been heard to say that membership in these associations, which ought to include all the members of the profession in good standing, is far better than forming separate associations.

Graduates of Queen's.

Queen's Medical Faculty announce the following as graduates this term who have secured the degree of M.D.: C. J. Baker, Newington; W. Beggs, Hallville; H. E. Bend, Kingston, Jamaica; R. M. Bradley, B.A., Boston, Mass.; J. C. Byers, Eganville; S. V. Carmichael, Spencerville, Ont.; F. A. Cays, Kingston; J. A. Charlebois, Hull; J. P. A. Clancy, Lumsden, Sask.; W. H. Cole, Ottawa; T. J. Collinson, Piercefield, N.Y.; H. A. Connelly, B.A., Vancouver, B.C.; N. A. L. Connelly, Vancouver, B.C.; W. F. Cornell, B.A., Kingston; M. C. Costello, Calgary; I. D. Cotnam, Pembroke; T. V. Daley, Kingston; H. Dunlop, B.A., Kingston; R. A. Hughes, Kingston; G. H. V. Hunter, Kingston; J. R. Hurtubiz, St Ann de Prescott, Ont.; J. M. Kelly, Addison; W. D. Kennedy, Ottawa; A. V. Laing, Dundas; A. L. Magill, Kingston, Jamaica; H. H. Millburn, Peterboro'; W. Morrison, B.A., Ashgrove; E. T. Myers, Portland; A. Macdonald, Regina, Sask.; F. B. McIntosh, Edmonton, Alta.; J. F. McDermott, Kingston; N. J. McKinley, Seeley's Bay; C. T. Nurse, Georgetown, British Guiana; C. A. Patterson, Athens; G. H. Patterson, Stella; P. J. Quinn, Oswego, N. Y.; J. E. R. Ramdholm, New Amsterdam, B.C.; T. R. Ross, Abernethy, Sask.; F. R. Sargeant, B.A., Kingston; B. Harty Thompson, Kingston; F. S. Young, Forfar; W. L. Yule, Gananoque Junction.

The medalists are: G. T. C. Nurse, Georgetown, British Guiana, in medicine, and I. D. Cotnam, Pembroke, in surgery.

The Children's Bill.

The medical profession in Great Britain, which has always sought to promote legislation to reform existing laws relating to the physical and moral welfare of the coming generation, is deeply interested in "The Children's Bill," now before the British House of Commons. It is not a party measure, and its mover is Mr. Herbert Samuel. The bill consolidates no less than twenty-two statutes, and parts of many others, besides a number of new provisions.

The five parts of the bill are: (1) Infant Life Protection—embodying and amending the Act of 1897, which was passed to

diminish the evils of baby-farming and the perils of infants put out to nurse; (2) Prevention of Cruelty to Children—strengthening the present laws and facilitating the work of the societies, and constituting overlying an offence; (3) Juvenile Smoking—prohibiting the sale of cigarettes to those under the age of sixteen, suppressing smoking by them in public places, and authorizing the confiscation of their tobacco; (4) Reformatories and Industrial Schools—consolidating the existing laws; and (5) the establishment of special children's courts for the trial of juvenile offenders, the enforcement of the attendance in court of parents, and the revision of the present methods of child-punishment, with especial reference to the unsuitability of common jails.

Mississippi Valley Medical Association.

The thirty-fourth annual meeting of the Mississippi Valley Medical Association will be held in Louisville, Ky., October 13, 14, 15, 1908, under the presidency of Dr. Arthur R. Elliott, of Chicago.

Announcement has just been made of the selection of the orators for the coming meeting by the President. The Address in Medicine will be delivered by Dr. George Dock, Professor of Medicine in the University of Michigan, Ann Arbor; and the Address in Surgery by Dr. Arthur Dean Bevan, Professor of Surgery in Rush Medical College, Chicago. The mere mention of these names is enough of a warrant that this feature of the programme will be in every way first class.

The local Committee of Arrangements in Louisville has selected The Seelbach Hotel as headquarters; the general sessions and the section meetings being held in the hotel's large auditoriums.

One of the features of the entertainment projected is a smoker in the famous Rathskeller of the hotel—the finest of its kind.

The McDowell button, so much admired at the 1897 meeting in Louisville, will be reproduced in bronze for this meeting.

American Medical Editors' Association.

The annual meeting of this Society will be held at the Auditorium Hotel, Chicago, on May 30th and June 1st. An extensive and interesting programme has been prepared and every member of the Association is urged to be present and editors of medical magazines, not now affiliated with this Society, are also invited to meet with them.

PROGRAMME OF THE ONTARIO MEDICAL ASSOCIATION.

TUESDAY MORNING, MAY 26TH, 10 A.M.

Medical Section—

1. "Vaccine Therapy in Medicine and Surgery."—W. L. Silcox, Hamilton.
2. "One Year's Experience with the Therapeutic Inoculation of Bacterial Vaccines at the Toronto General Hospital."—George W. Ross, Toronto.
3. "The Opsonic Treatment of the Diseases of the Skin."—D. King Smith, Toronto. Discussion on Bacterial Vaccines, to be led by W. Gibson, Kingston.
4. "Neurasthenia from the Etiological Standpoint."—H. B. Anderson, Toronto. Discussion to be led by J. A. Bauer, Hamilton.
5. "Rare Complications of Pregnancy, with Report of a Case." A. Dalton Smith, Mitchell. Discussion to be led by G. S. Glassco, Hamilton.

TUESDAY MORNING, MAY 26TH, 10 A.M.

Surgical Section—

1. "Conservative Surgery of the Tubes, with Report of Five Cases."—L. W. Cockburn, Hamilton. Discussion to be led by T. Shaw Webster and S. M. Hay, Toronto.
2. "Method of Treatment of Sprained Ankle."—J. Sheahan, St. Catharines. Discussion to be led by F. N. G. Starr, Toronto, and T. H. Balfe, Hamilton.
3. "Obstruction Due to Cancer of the Large Bowel."—H. A. Bruce, Toronto. Discussion to be led by W. Gunn, Clinton, and Henry Howitt, Guelph.
4. "The Surgical Treatment of Compression Paraplegias." A. Primrose, Toronto. Discussion to be led by A. B. Welford, Woodstock, and L. W. Cockburn, Hamilton.

TUESDAY MORNING, 10 A.M.

Section of Preventive Medicine.

1. "Diphtheria Antitoxins as Prophylactic and Curative Agents."—W. Goldie, Toronto.
2. "Medical Inspection of Schools."—Helen MacMurchy, Toronto.

3. "Control of Minor Contagious Diseases."—H. Sinclair, Walkerton.
4. "Precautionary Measures Necessary to Prevent Infection in Typhoid Fever Patients."—J. A. Amyot, Toronto.
5. "Sewage System for Towns and Smaller Cities."—T. Aird Murray, C.E., late of Leeds, England.
6. "Anti-Variolous Vaccines."—Charles A. Hodgetts, Toronto.

TUESDAY NOON.

Clinic and Luncheon at the City Hospital.

TUESDAY AFTERNOON.—GENERAL SESSION, 2.30 P.M.

1. President's Address.
2. Ballot for the Committee on Nominations and Appointment of Scrutineers.
3. Symposium—Arteriosclerosis.
   Pathology—J. J. Mackenzie, Toronto.
   Cerebral Manifestations—Colin K. Russell, Montreal.
   Ocular Manifestations—Hermon Sanderson, Detroit.
   Aortic Arch Manifestations—Thomas McCrae, Baltimore.
   Muscle Manifestations—Harry C. Boswell, Buffalo.
   Visceral Manifestations—J. A. Bauer, Hamilton.
   Treatment—A. McPhedran, Toronto.
4. Report of Scrutineers.

4.30 P.M.—Meetings of Committees—Standing, Temporary and Special.

TUESDAY EVENING.

Smoking Concert at the Yacht Club, Hamilton Beach.

The Committee on Arrangements are providing an entertaining programme.

WEDNESDAY MORNING, MAY 27TH, 9.30 A.M.

Medical Section.

1. "Remarks on the Duties of the Medical Examiners in Life Insurance."—G. S. Glassco, Hamilton.
   "Remarks on the Fees for Life Insurance."—Norman Walker, Niagara Falls.
   Discussion on Life Insurance to be led by W. H. Merritt, St. Catharines; J. H. Howell, Welland; E. M. Hooper, St. Catharines, and T. F. McMahon, Toronto.

2. "Non-Alcoholic Cirrhosis of the Liver."—R. J. Dwyer, Toronto.
3. "Some Points in the Treatment of Puerperal Septicemia." —A. H. Wright, Toronto.

   Discussion to be led by H. S. Griffin, Hamilton.
4. "Addison's Disease and Adrenal Insufficiency."—Benson Cohoe, Baltimore.
5. "The Estimation of the Pressure of the Cerebro-Spinal Fluid."—R. D. Rudolf, Toronto.
6. "The Medical Superintendent."—Charles O'Reilly, Toronto.

WEDNESDAY MORNING, 9.30 A.M.

Surgical Section—

1. "Exstrophy of the Bladder, Report of a Case."—F. N. G. Starr, Toronto.
2. "Report of an Extraordinary Case of Foreign Body in the Bladder."—Edwin Seaborn, London.

   Discussion to be led by E. B. O'Reilly, Hamilton; George E. Armstrong and A. E. Garrow, Montreal.
3. "The Hyperemic Treatment."—H. P. Lyle, New York City.

   Discussion to be led by V. P. Gibney, New York; S. H. Westman, Toronto, and E. B. O'Reilly, Hamilton.
4. "Ulcer of the Stomach."—W. E. Olmsted, Niagara Falls.
5. "Duodenal Ulcer."—A. E. Garrow, Montreal.

   Discussion to be led by J. W. Edgar, Hamilton; G. A. Bingham, Toronto, and Robert Lucy, Guelph.
6. "Mechanical Ileus; Operation, Recovery; Remarks on the Diagnosis and Treatment."—George T. McKeough, Chatham.

   Discussion to be led by P. Stuart, Guelph; H. P. Lyle, New York, and A. E. Garrow, Montreal.
7. "The Surgical Aspect of Hemophilia, with Special Reference to Hemarthrosis."—Beverley Milner, Toronto.

   Discussion to be led by V. P. Gibney, New York; Clarence Starr, Toronto, and George E. Armstrong, Montreal.

WEDNESDAY MORNING, 9.30 A.M.

Section for the Eye, Ear, Nose, and Throat.

1. "Lateral Sinus Suppuration and Cerebellar Abscess."—J. P. Morton, Hamilton.
2. "Tubercular Uveitis."—J. W. Stirling, Montreal.
3. "Glioma."—R. A. Reeve, Toronto.

4. "Clinical Measurement of Relative Accommodation."—Lucien Howe, Buffalo.
5. "Accessory Sinus Disease."—Perry Goldsmith, Toronto.

WEDNESDAY AFTERNOON.—GENERAL SESSION, 2.30 P.M.

1. Address in Surgery—Charles L. Scudder, Boston.
2. Gangrene and Abscess of the Lung—George and E. Armstrong, Montreal.
3. Results of the Bier-Klapp Treatment of Tuberculous Sinuses and Joints at the Hospital for the Ruptured and Crippled, New York City—Virgil P. Gibney, New York, and C. E. Preston, Ottawa.

4.30 P.M.—Business Session, Reports of Committees, Election of Officers, etc.

WEDNESDAY EVENING.

The Annual Dinner to be given in the Royal Hotel, at which the members will be the guests of the medical men of Hamilton.

THURSDAY MORNING, MAY 28TH, 9.30 A.M.

Medical Section—

1. Mouth Breathing—John Hunter, Toronto.
2. Report of a Case of Cerebro-spinal Meningitis, Recovery—A. R. Gordon and Allan W. Canfield, Toronto.
   Discussion to be led by G. S. Glassco, Hamilton.
3. A Plea for Rational Therapeutics—George Acheson, Galt.
   Discussion to be led by V. E. Henderson, Toronto.
4. The Treatment of Appendicitis—G. R. Cruickshank, Windsor.
   Discussion to be led by G. D. Farmer, Ancaster; D. H. Arnott, London; and H. A. Bruce, Toronto.
5. Some Points in the Diagnosis and Treatment of Diabetes Mellitus—Campbell Howard, Montreal.
   Discussion to be led by Graham Chambers, Toronto.
6. Rheumatism—J. C. Meakins, New York.
   Discussion to be led by J. T. Fotheringham, Toronto; and R. V. Parry, Hamilton.

THURSDAY MORNING, 9.30 A.M.

Surgical Section—

1. Pyelonephrosis and Pregnancy—J. F. W. Ross, Toronto.
   Discussion to be led by Henry Howitt, Guelph.

2. Transplantation of the Omentum in Hepatic Cirrhosis—Edmund E. King, Toronto.
   Discussion to be led by T. H. Balfe, Hamilton.
3. Pancreatic Cyst—D. E. Mundell, Kingston.
   Discussion to be led by George E. Armstrong, Montreal; and Clarence Starr, Toronto.
4. Hypodermic Anesthesia—D. Dunton, Paris.
5. Spinal Analgesia—History, Technique, Phenomena, Results—Duncan Anderson, Toronto.
   Discussion to be led by G. A. Bingham, F. W. Marlow, Samuel Johnston, Toronto; and A. H. Perfect, West Toronto.
6. The Third Dimension in the Visualization of Surgical Procedures—N. A. Powell, Toronto.
7. The Treatment of Acute Diffuse Suppurative Peritonitis Without Drainage—C. F. Moore, Toronto.
   Discussion to be led by G. A. Bingham, Toronto; W. E. Anglin, Kingston; and Angus McKinnon, Guelph.

THURSDAY MORNING, 9.30 A.M.

Section of Obstetrics and Diseases of Children—

1. A Fatal Form of Eclampsia—K. C. McIlwraith, Toronto.
   Discussion to be led by J. D. Balfour, London.
2. Obstetrical Technique—Frederick Fenton, Toronto.
3. Some Complications of the Puerperium, report of a case—J. R. Stanley, St. Mary's.
4. Missed Abortion—H. Ferguson, London.
5. Mole Pregnancy with Specimen—C. R. Chartiers, Chatham.
6. A Case of Spasmodic Stenosis of the Pylorus in an Infant, with Recovery—H. T. Machell, Toronto.
7. Pyo-pneumo-thorax due to a Fusiform Bacillus — Allen Baines, Toronto.

THURSDAY AFTERNOON, GENERAL SESSION, 2.30 P.M.

1. Address in Medicine—Charles L. Stockton, Buffalo.
2. X-Ray Diagnosis in Medicine and Surgery, with lantern slide demonstration—Lewis G. Cole, New York.
3. Psychiatry in Relation to General Medicine—C. K. Clarke, Toronto.

BUSINESS SESSION.

Unfinished Business, Installation of Officers, etc.

Personals.

Dr. Frederick Guest, of St. Thomas, has been appointed an associate coroner for Elgin County.

Dr. Sam Johnston of Toronto, after a trip to England, France, Switzerland and Italy, returned April 6th.

Dr. James A. Robertson and his son and partner, Dr. Lorne F. Robertson, of Stratford, sailed from Boston for Egypt April 4th.

Dr. A. C. Bennett, who has been doing post-graduate work for about two years in Dublin and London, will return to Toronto in June.

Dr. E. Stanley Ryerson, of Toronto, announces to the Profession that after May 1st, 1908, he will devote himself to the practice of surgery.

Dr. John Stewart, of Halifax, visited his brother in Toronto March 21st, and remained until April 10th, when he left for Montreal, where he expected to remain a couple of days before returning home.

Dr. J. Orlando Orr, of Toronto, after an automobile trip through Italy, Switzerland and France, reached London April 1st. In a letter written from the latter city he stated that he expected to return about May 1st.

Dr. W. H. B. Aikins sailed for Hamburg on April 25th for a two months' vacation in Germany. It is his intention to visit some of the leading medical clinics there, as well as some of the noted health resorts—Carlsbad, Marienbad, Weisbaden and Nauheim.

Dr. G. W. Crosby (Tor., '04), after practicing in the Parry Sound District, went to Europe for post-graduate work. He recently returned to Canada, and is now practicing at 78 College Street, Toronto. He will confine his work entirely to diseases of the eye.

Dr. R. H. Robinson, of Wilton Avenue, Toronto, met with a painful accident March 13th. While walking on a slippery sidewalk he was thrown down by a large dog, and received injuries to his back and left leg. He was confined to bed for about four weeks, and at the time of writing (April 20th) is still somewhat seriously crippled.

Obituary.

HIS EXCELLENCY JOHANNA FREDERICK AUGUST VON ESMARCH.

Professor von Esmarch, the distinguished surgeon and Professor of Surgery in the University of Kiel, died February 23rd, of pneumonia following influenza, aged 85.

WILLIAM McQUEENE TEETZEL, M.D.

Dr. Teetzel, of Cleveland, died at his residence in that city, March 31st, aged 35. The cause of death is said to have been some obscure form of spinal disease. Dr. Teetzel graduated from Trinity University in 1896, and shortly afterwards commenced practice in Cleveland, and up to the time of his illness was very successful.

W. S. ENGLAND, M.D.

Dr. England, of Winnipeg, died April 24th, aged 40. He was born at Dunham, Quebec, and soon after graduating commenced practice in Winnipeg. He was recognized as one of the leading surgeons of Western Canada. He was professor of anatomy in Manitoba Medical College, surgeon in the General Hospital, and consulting surgeon in St. Boniface Hospital. He was attending to his duties as usual up to the evening of April 23, but had an attack of apoplexy about midnight, and died in a few hours.

EDWIN GOODMAN, M.B.

Dr. Goodman, one of the oldest citizens of St. Catharines, and one of the oldest physicians in Ontario, died April 9th, aged 75. Dr. Goodman graduated M.B. from Trinity University in 1855. Soon after graduating he settled in St. Catharines, and became one of the most successful physicians of the Niagara Peninsula. He was surgeon to the 19th Regiment during the Fenian Raid in 1866. He took a great interest in sports, especially lawn tennis and bowling. He also took great interest in public matters, serving as alderman of St. Catharines several years, as Mayor for two years, and as chairman of the Board of Health for eleven years. He was a member of the Public Library and Collegiate Institute for many years, and a coroner for thirty years.

JOHN WILCOX PEAKER, M.B.

Dr. Peaker, of 347 Bathurst Street, Toronto, died at his late residence, April 5th. Dr. Peaker received his preliminary education at the Brampton High School, his medical education in the Toronto School of Medicine, and graduated M.B. from the University of Toronto in 1886. After graduating he engaged in post-graduate work, studying for about two years in Great Britain, and received the double surgeon's and physician's qualification of London. Soon after returning to Canada he commenced practice in Toronto, and was highly successful for many years.

He, unfortunately, suffered much from rheumatism, and had a double aortic murmur for some time. About two weeks before his death he had an attack of apoplexy, followed by paralysis. Dr. Peaker possessed good ability, sound judgment, and was highly respected and much beloved by his patients and friends in and out of the profession.

HON. DR. WILLOUGHBY, M.P.P.

Dr. W. A. Willoughby, of Colborne, died April 28th, aged 64. He graduated M.D. from Victoria University in 1867, and at once commenced practice in Grafton, in West Northumberland County. He removed to Colborne, a village seven miles east of Grafton, in East Northumberland County, in 1873. He was always exceedingly popular, both as a physician and a "man of affairs." He took a great interest in military matters, and was Surgeon-Lieut.-Col. of the 40th Battalion of Infantry. He was a member of the Colborne Municipal Council for eight years, Reeve for seven years, member of the School Board for twelve years, and Warden of the united Counties of Northumberland and Durham in 1884. He was first elected to the Ontario Legislature as member for East Northumberland in 1886, was defeated in February, 1888, was re-elected after the death of the sitting member, Mr. Clarke, in October, 1888, was defeated in 1898, but was re-elected in 1902, and held the seat until the time of his death. He was very popular in the Legislature on both sides of the House, and was for many years Whip for the Conservative party. On the formation of the new Government under Mr. Whitney he was made a Minister without portfolio. He was certainly one of the most popular men in a social way, in a professional way, and in a political way in the Province of Ontario.

HUGH McCALL, M.D.

Dr. Hugh McCall died at his late residence, London, Ontario, April 20th, 1908, aged 64. He was born in the Township of Westminster, Western Ontario, but received his medical education in New York, where he graduated, M.D., in 1870. After graduating he took courses in England and Germany. He then returned to the United States and settled in Lapeer, Michigan, where he was a prominent physician and surgeon for 35 years. Owing to a severe illness he was forced to give up practice and he returned to Canada in 1906, and resided in London with his sister and aged mother (now in her 92nd year).

In January of the present year he presented his splendid collection of medical works to the library of the Western Medical College, of London, accompanied by this message to the students: "Let knowledge grow from more to more, but more of reverence in us dwell." We are told by one who knew him well that while he was esteemed for his rare medical skill by both the profession and the public, "he was still more beloved for his whole-souled kindliness and genuine manliness—truly a man of the Dr. McClure type among his fellows."

Book Reviews.

MINOR MEDICINE: A TREATISE ON THE NATURE AND TREATMENT OF COMMON AILMENTS. By Walter Esser Wynter, M.B., B.S. (Lond.), F.R.C.S., F.R.C.P.; Physician to Middlesex Hospital and Lecturer on Medicine in the Medical School; Examiner in Medicine to the Royal College of Physicians; late Lecturer in Pharmacology and Therapeutics and Examiner in Pharmacy to the Royal College of Physicians. D. T. McAinsh & Co., Toronto. Sidney Appleton, London. 1908.

Dr. Wynter's book will undoubtedly be of great service to many general practitioners, especially during their earlier years in practice; the ailments discussed are those one is frequently unable to find in the medical manuals, and in the management of which students are, as a rule, uninstructed. The treatment recommended for such minor diseases as chilblains, bunions, ingrowing toenails, is eminently practical; and a careful perusal of this little book will not only be pleasant reading, but the practical knowledge to be gleaned from its pages will be worth a small fortune to many a physician.

"INTERNATIONAL CLINICS." A quarterly of illustrated clinical lectures, and especially prepared original articles on Treatment, Medicine, Surgery, Neurology, Pediatrics, Obstetrics, Gynecology, Orthopedics, Pathology, Dermatology, Ophthalmology, Otology, Rhinology, Laryngology, Hygiene, and other topics of interest to students and practitioners, by leading members of the medical profession throughout the world. Edited by W. T. Longcope, M.D., Philadelphia, U.S.A., with the collaboration of Wm. Osler, J. H. Musser, A. McPhedran, F. Billings, Chas. H. Mayo, Thos. H. Rotch, John G. Clark, Jas. J. Walsh, J. W. Ballantyne, John Harold and Richard Kretz, with regular correspondents in Montreal, London, Paris, Berlin, Vienna, Leipsic, Brussels and Carlsbad. Vol. I. Eighteenth Series. 1908. J. B. Lippincott Co., Philadelphia and London. 1908.

The above is a volume of about 300 pages, well printed, neatly bound and illustrated by a considerable number of plates and diagrams, several of which are in colors. Under the section of Treatment come articles on Sanitaria, by Lawrason Brown, of Saranac; Notes on Syphilis, by Jean Dardel, of Paris, with ref-

erence to the injection of soluble salts of mercury; and several others of interest. In the Medical division Wilson, of Philadelphia, discusses Paratyphoid Fevers; Rudolf, of Toronto, the normal temperature of the body, and Sir Dyce Duckworth "textural proclivities and immunity the personal factor in medicine." The subjects treated under Surgery are: "Gastric and Duodenal Ulcers," "Diseases of the Gall Bladder," and several others. Under neurology we note George L. Walton on Fracture of the Spine; certain articles on gynecological subjects and pathology are also worthy of attention. Finally, the last 100 pages are devoted to the progress made during 1907, edited by A. A. Stevens, Edsall, Nisbit, and Gus Bloodgood. The plates illustrating these are particularly good and do much to elucidate the text.

TREATMENT OF INTERNAL DISEASES. By Dr. Norbert Ortner, of the University of Vienna. Edited by Nath'l Bowditch Potter, M.D., Visiting Physician to the New York City Hospital, and to the French Hospital; Instructor in Medicine, Columbia University. Translated by Frederick H. Bartlett, M.D., from the Fourth German Edition. Octavo, 658 pages. Cloth, $5.00 net. J. B. Lippincott Company, Philadelphia, London, Montreal.

The scope of this book is treatment, not prophylaxis, only so much of the pathological physiology of the diseases being discussed as bears upon their rational treatment. The reader is shown the importance of mechanical, dietetic, climatic, and all extra medicinal methods, then the applicability of certain drugs, their respective advantage, disadvantage, and limitations, with useful prescriptions from the author's own experience and that of others, leaving the reader better armed to meet casual indications and the various contingencies which arise and require symptomatic treatment.

One of the most attractive features of the book is the citation and description of numerous climatic resorts, the discussion of hydrotherapeutics and all extra medicinal measures, and the judicious reasons for the application of those selected.

Dr. Bartlett has translated the German text into idiomatic English, and without losing the spirit or the details of the original. Climatology, hygiene, and dietetics have been adapted to the needs of the American practitioner, and the prescriptions to conform to the American Pharmacopœia. Where the editor's views differ from the author's, he has selected suggestions from

the American or English clinicians. Such additions have been enclosed in brackets.

It contains a carefully selected list of American resorts and a brief mention of their most important features, with a tabulated list of drugs, many of the tables including those of the various iron compounds, of the iron-containing waters, and of arsenical water, which will prove very useful for ready reference.

Atlas of Applied (Topographical) Human Anatomy. For Students and Practitioners. By Dr. Karl Von Bardeleben and Prof. Dr. Heinr Haeckel, in collaboration with Dr. Fritz Frohse and Prof. Dr. Theodore Ziehen. Only Authorized English Adaptation from the Third German Edition, containing 204 wood cuts in several colors and descriptive text by J. Howell Evans, M.A., M.B., late senior Demonstrator of Human Anatomy at St. George's Hospital, London, Demonstrator of Operative Surgery at St. George's Hospital, and Assistant Surgeon to the Cancer Hospital, London. Rebman, Limited, 128 Shaftesbury Avenue. London; Rebman Company, 1123 Broadway, New York, and C. E. Wingate, Toronto.

This Atlas of Anatomy supplies a very great want. We have looked through the illustrations and know of none that are equal to them. They are not highly colored and distorted, but are excellent in design and accurate in their description. This is a book to which a surgeon may refer for quick reference and get the information sought. There are the transverse sections showing the organs as viewed in that manner, as well as dissected specimens. The dissected specimens are not spoiled by being all marked up, but indicating lines run from each part to the name placed at the border of the cut, not in any way interfering with the cut itself. It is impossible to individualize these specimens. The nomenclature is the one most usually employed amongst the English-speaking nation, and in that respect differs from the original German work, which is the B. N. A. This will undoubtedly be changed to the B. N. A. nomenclature in subsequent editions.

All practitioners who do surgery feel the need of ready reference to anatomical specimens or plates, and this Atlas certainly supplies that need. The Rebman firm have always excelled in their illustrations, and in this particular volume they have still further increased their reputation. The press-work and typography are all that can be desired in such a volume.

PRACTICAL FEVER NURSING. By Edward C. Register, M.D., Professor of the Practice of Medicine in the North Carolina Medical College. Octavo volume of 352 pages, illustrated. Philadelphia and London: W. B. Saunders Company. 1907. Cloth, $2.50 net. Canadian agents: J. A. Carveth & Co., Limited, Toronto.

In the preparation of this volume the object has been to present to nurses a working text-book that will completely cover the field of practical fever nursing. A nurse, before she can intelligently care for a fever patient, must have some knowledge of the disease and its medical treatment. She cannot know the cause and significance of many of the symptoms unless she knows something of the pathologic processes that are going on within the body, nor can she anticipate all that is expected of her by the physician unless she is at least partly familiar with the history and treatment of the fever which she is nursing. For this reason it was necessary in the preparation of a work of this kind to incorporate and describe in as non-technical a manner as possible the pathology of the different fevers, their prognosis, and the various methods of treatment.

Selections.

Passive Hyperemia.

B. M. Bernheim, Baltimore (*Journal A. M. A.*, March 14), describes the Bier method of using hyperemia by cupping for therapeutic purposes. Cups of all sizes to fit every part where the method may be desired to be applied have been devised, and the suction is produced by means of a rubber bulb. The applications, for example, in a case of carbuncle, previously opened, last five minutes, the pressure being carefully regulated; then the cup is removed and the exudate gently sponged away with a piece of gauze, after which the process is repeated after two minutes' rest, and this alternate cupping and resting is kept up for from thirty to sixty minutes, when the part is cleansed and a simple wet dressing applied. The patient is again treated the following day; if a crust has formed, as over a sinus, it is carefully removed with a blunt instrument and the cupping repeated as before. The pus will usually be found to decrease each day and the granulations to become healthier, firmer and less likely to bleed. The improvement continues each day, the exudate decreases and the case progresses toward recovery. In regulating the pressure, a bluish-red tint should always signify the limit; too much pressure, even though exerted without pain, may induce hyperemia amounting to stagnation, obviously not the end desired. Experience shows that the first few days of the treatment are most important; therefore, during that time the cupping should be done as above directed; later, as the condition improves, the length and frequency of the treatments may be reduced. Squeezing and massaging of the parts to get out the remaining pus is not allowable, neither is curetting. It is best also to avoid the use of the probe or of splints, and the patient should be advised to use the affected member. Frequently patients present themselves early in the infection (as in beginning carbuncle, ischiorectal abscess, and bubo) before suppuration has appeared, only the usual redness, swelling, tenderness and infiltration being present. Such cases should be treated as described, but without incision, as resolution sometimes occurs without the use of the knife. When, however, incision is demanded, a cut from 1 to 1.5 cm. long should be made and the cup applied at once. In cases of bone tuberculosis, sequestra are sometimes drawn out; at other times they do not come away and are best left undisturbed, as Bier has observed that they sometimes unite with the healthy bone. The formation

of cold abscesses is not to be dreaded, but looked on as a normal process in the course of the disease. They should be promptly recognized and followed by the usual incision and cupping. Curetting, probing or iodoform injections increase the chances of infection, and immobilization is not advised. In acute mastitis, to avoid pain, the diameter of the cup should be at least 1 cm. greater than that of the breast, and when the breast is engorged with milk and much pus is also present, and very little comes away, a small cup should be applied over the nipple, and incision made after the treatment, simply to draw off the pus and milk. This is only necessary in the presence of pus, and will hardly be needed more than two or three times. While recognizing that there are cases unsuited to this treatment, Bernheim claims for it certain advantages, viz.: 1. Relief of pain, which is one of its most striking features. 2. Rapidity of cure, the disease being materially shortened. 3. Preservation of function. The tuberculous joints are not immobilized, healing taking place with motion very frequently. The wide radial incisions are avoided in mastitis; hence a minimum of the scar tissue that often interferes with the function of the gland. 4. Discarding of the drain, itself a distinct advance. 5. Simplicity. The physician, as well as the surgeon, can use the method successfully.

Chloroform Anesthesia.

This drug is constantly losing ground, except in obstetrical practice, as a method of general anesthesia. In recent literature, the chief references are to early and late deaths after chloroform, the effect of chloroform on the viscera, the importance of giving this drug in exact doses, its mixture with oxygen and ether to diminish its dangers. All of these subjects have been previously discussed in *Progressive Medicine*. I find nothing new to add.

In my own experience I find that there are occasions when chloroform is indicated, either as the only anesthetic, or, now and then, in combination with ether. In the Rochester Clinic, in 1905, Alice Magaw found it necessary to give chloroform 133 times, as compared with ether 2,847—a proportion of about 1 to 20. This is a larger proportion than that in which I found it necessary to use chloroform.

Alcoholics with thick necks take ether at first badly, and the addition, now and then, of a few drops of chloroform during the beginning of the anesthetic lessens the stage of excitement and the muscular rigidity which produces cyanosis. In cases of peri-

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Original Communications.

THE STIMULANTS USED IN COOKING.*

By Douglass W. Montgomery, M.D.,
Professor of Diseases of the Skin, University of California.

The table as a piece of furniture should be held in great esteem. By turns it is loaded with learned books and succulent meats, which serve for nourishment for mind and body. No one who loves his fellow-man wishes to see the pleasures of the table curtailed, for it is here that some of the most delightful intercourse of human beings takes place. As Rudyard Kipling puts it, we can here praise Allah, who has not terminated the delights nor separated the companions. While conversation is the chief pleasurable feature at table, yet the general surroundings and the manner of preparing and serving the food are all contributory to the charm of a convivial gathering.

But good and evil are born at a whelping, and, while the table brings us much good, it also brings us much evil. Remonstrance is especially needed against the misuse of spices and pepper.

In preparing food, seasoning is important, and when delicately done adds much to our pleasure. Take salt, for instance, of which it is said it is something that, being left out, makes food taste bad. No matter how carefully the cooking is done, if salt is omitted, the dish will taste flat. The ancients considered salt so necessary a seasoning in all cooking, and held it in such favor, that metaphorically they applied the term salt to the witty sayings that give zest to conversation.

Stimulating drugs, such as pepper, are added to food to either

*Read before the Sacramento Society for Medical Improvement, March 17, 1908.

stir up a jaded appetite or to take away the flat taste, or to vary the monotony of diet.

It would seem impossible in any of our large cities, for a person with a fair digestive system, and moderately well supplied with money, to suffer from monotony of diet. If, after being shown the long list of different good things to eat, one were told that many people live exclusively on bread, meat, potatoes and sugar, with coffee, whiskey, and pepper, one would be surprised. Nevertheless, such is the case. With us this state of affairs would seem especially strange, with a bay and river system that is richer in food than Delaware Bay, and surrounded by the most fertile valleys the world possesses.

The character of our population, too, should prevent sameness in eating. The Southern European, with his liking for garnishes and vegetables, should correct the heavy, monotonous menu of the Anglo-Saxon. The German Israelites are good eaters and bring us many fine dishes. The Italian market gardeners furnish us with a number of vegetables that in the Eastern States are high-priced novelties, and the proprietors of Italian vegetable stalls know many a secret of good cooking, especially in the way of soups and salads. In California, therefore, there is no excuse for the deadly round of bread, meat and potatoes that is the curse of the Middle and Eastern States.

Our very early ancestors, like the other carnivorous animals, ate their food as they killed it, while it still had its warmth, and before the myosine had set. The meat was, therefore, warm and tender. We have learned to keep meat until the myosine again liquefies, and we cook it to restore the volatility of the flavors. In a savage state man's food consists of so few articles, and the cooking is so badly done that the longing for new sensations to the palate must become intense. The demand for strong spices and alcohols becomes a passion that civilized peoples hardly realize, as, for instance, among Indians, who will drink a diarrhœa mixture loaded with cayenne pepper as a beverage. In this view one can get the attitude of the barbarians toward ancient Rome, and can understand why Alaric, on conquering the Eternal City, demanded an annual contribution of pepper. It is said that the Huns, in order to make their meat tender, would ride on it all day. Between the odors acquired from the rider and from the horse such a piece of meat would go down better for a liberal peppering.

The active overland trade between the Orient and Europe was in spices and other drugs that contained great value in small bulk. It was this Oriental trade that made the commercial pre-

dominance of every empire from the Babylonian down through the Assyrian, Greek, Alexandrian, and Roman to the Venetian. It was the spice trade and the desire to reach the Orient by sea to conveniently get at these condiments, that led to the discovery of America and to the rounding of the Cape of Good Hope. Then came the commercial rise of Portugal, Holland and England, and now this Oriental trade has begun to build up the west coast of the United States and San Francisco. The fundamental reason for all this striving is that spices give the human being pleasure, and for pleasure he is willing to go any length, and to endure all hardships, even those of ill-health.

In Nuremberg they keep the old home of Albrecht Durer as a revered monument, and it is furnished as nearly as possible in the way it was in the lifetime of the artist. The kitchen is small and inconvenient. The cooking utensils are few, unhandy and clumsily made, and the stove is a primitive, inconvenient affair. No wonder Albrecht died of intestinal cancer, seeing the kind of food his bowels must have been given to elaborate as nourishment for his august brain. As I looked at the kitchen outfit I saw the material evidence of poor cooking, with its natural consequence of longing for pepper and over-seasoning, necessitating in its turn the long, expensive, risky camel-freight across the Mesopotamian deserts, through a country controlled by the stupid Turk. The obtuseness of the Turk in commercial matters is proverbial, and he barred the way. No wonder America was discovered, and it was particularly fitting that a lady should give her jewelry to have the matter brought about. The whole of Rabelais, that incarnation of the Middle Ages, who lived in the time of Isabella, is one long expression of the desire to relieve the flatness of ill-cooked food by means of vinegar, salt, mustard, pepper, and by the smoking and salting of meats. These foods were to be washed down with great quantities of strong drink, on the principle never to spare liquor to those who are at hot work.

In the memory of those now living, the people of the United States were rural. Even the urban populations were countrified in life and thought. It is only of recent years that commerce has so developed as to change the life of the nation. In a rural population the food is bread, and meat and potatoes, and nothing else, and the castor is always on the table. Pork is about the only meat used, and it is frequently badly cured. We all of us remember the rusty pork of the farmhouses. The bad quality of the meat on the farms led to the consumption of large quantities of starchy foods, as breads, pies, cakes, and heavy pastries. As sugar grew cheaper it also came more into use. This heavy

food, while men were working in the open air on the farm, was usually well assimilated. But as commercial life developed and people got indoor and more sedentary occupations, such concentrated diet acted more and more disastrously on the digestive organs. The combination of heavy feeding with sedentary habits is especially fatal to those that by nature are endowed with a particularly fine digestion. This is one of the most interesting chapters in the hygiene of nutrition, and is best illustrated by a concrete example:

A man past forty-five years of age had a very active occupation before the great fire in San Francisco. He liked good eating, and especially peppery dishes, and also took many drinks of Scotch whiskey throughout the day. His elimination was excellent, and pleasure, not pain, was his portion. After the fire the natural slowing down of elimination at his time of life was accentuated by a more sedentary occupation. Burke has said that there are two things we must guard against as we grow older, the pleasures of the table and a love for accumulating money. This aphorism held true of my man. The quantity of food consumed did not decrease, but the elimination did. The superfluity had to break out somewhere. His face became more full and florid, and its natural wrinkles disappeared, giving him a fictitiously robust appearance. He acquired a catarrhal affection of the bronchial tubes, and a constant cough and clearing of the throat, that is called by the Spanish, "La tos de ricos," the cough of the rich. Rheumatic swelling of some of the finger joints and rheumatic pains arose, and intensely itchy patches of papular eczema appeared. These were the first symptoms of degeneration, which were bound to augment. Is anyone so foolishly optimistic as to suppose that this man will cease whipping up his digestive organs with alcohol and pepper? On the contrary, with the increase of his misery, the use of stimulants will tend to increase. That in the long run such excitation does not ameliorate, but rather tends to drive one farther into trouble, the ordinary man does not know, or knowing, does not heed.

It is the observation of such cases that makes me regard the beginning of the fifties as a particularly critical time of life, the dangers of which may be accentuated by many fortuitous circumstances. For instance, in one of Guy de Maupassant's stories the author depicts a character as a man with a most vigorous digestive system, forced into physical inactivity by having had his feet shot off in the Franco-Prussian War. The author describes him as getting himself into a railway carriage. De Maupassant says: "He was perhaps fifty-three years of age,

but his hair was already nearly white. He had a bristling moustache, and was very fat and heavy bodied, as strong, active people tend to become when forced into inactivity. He mopped his forehead, and, breathing hard, inquired if I should be incommoded by his smoking."

You have here an artistic picture of the aspect of the kind of man I have in mind. He would naturally, from the state of his nutrition, have seborrhea, and consequently his hair would become by fifty not only gray, but white. Being naturally robust, he had stout hair, especially in the moustache. As a cripple he had become fat from inaction, which made him puff and perspire when in motion. There was also a catarrh of the upper respiratory passages, and the discomfort of short breathing was relieved by smoking. We have all of us often seen such people hurriedly fumble for their tobacco.

Anatole France also gives a good description of this class of man: "Notwithstanding his gray hair, he seemed to be in the full strength of his years. He had a smiling mouth and lively eyes, and the folds of his chin descended majestically down over his stock, that, through sympathy, had become as greasy as the neck spread over it."

Such men are not ascetics. They enjoy eating, and are apt to be devoted to highly spiced foods. They suffer from all sorts of ailments incident to their mode of life, such as rheumatism, gout, stone in the bladder, biliary calculi, and many irritating eruptions of the skin. At the same time they often are men of immense physical force, and are among the best positive workers in the world. They have a shorter life than nature intended, and may be said to literally dig their grave with their teeth. These vigorous individuals eat until they get that sense of fullness and repletion that comes from taking in a large bulk of food. They sometimes say that the long-drawn-out dinner of many courses is the only one that gives them entire satisfaction. Their vigorous digestive system enables them to turn this mass of food into nutritious juices that have to be disposed of either as units of work, or as excreta, or as fat. As these men grow fatter their capacity for work is lowered, but their voraciousness in eating continues. It is not infrequent for them to have spells of depression and melancholy, which they try to escape by drinking. While drunk they do not eat, and after such an enforced fast they crawl out as limp as a rag, but feeling infinitely better mentally. Beside going on a spree, they have another natural remedy, an attack of gout, in which their physician puts them on a low diet and a course of purgatives and alkalies. Such

great, fat, pulpy individuals form excellent meat for microbes, and if the bursting of an overfull blood vessel does not kill them pneumonia may, and in any event, when once attacked by one of the great maladies, their exit is apt to be rapid.

The flat taste of food is usually due to over-cooking or bad salting. The flavors of food are the soluble substances that touch the palate, and the odors that please the sense of smell. A good example in this kind was given in the late Spanish War. The army before Santiago was supplied with canned roast beef, which proved meat out of which the soluble, natural flavors had been taken to make beef extracts: the capitalists' idea of killing two birds with one stone. In that warm climate, where meat is not very well tolerated at best, this canned roast beef was nauseating. In such a case a large quantity of pepper would have made it more palatable, but not more wholesome.

One of the secrets of cooking is not to allow the escape of these savors, and if they escape, and if the odor of the cooking is throughout the house, one may expect a tasteless dinner, for the bouquet of the food is in the atmosphere and not in the viands. A cauliflower, for instance, that is cooked for ten or fifteen minutes over a quick fire in well-salted water, will be firm and stand up in the dish, and will have a well-defined, agreeable taste, whereas, if longer and more slowly cooked, it will fall into a shapeless, flat-tasting mush, requiring pepper to whip it into line for the table.

Many people take stimulants to increase appetite. This at times is beneficial, and is one of the most frequent therapeutic measures to bring about a balance of health. Sometimes the vital forces seem to slow down, and the individual "fails," as we say, from no ascertainable cause. Under such circumstances a stimulant of any kind may be of service. It may be a course of the mineral acids, it may be travel, it may be a greater variety of food. In whatever form it comes it whips up the vital forces that were insensibly slowing down, and does good. A discreet amount of stimulation is often, therefore, as grateful to the body as a fertilizer is to a plant. Stimulation may, however, like all good things, be carried to excess. Many people so copiously pepper their food that they fall directly into the monotony of diet from which they desire to escape. Their taste becomes so vitiated that the only flavor they appreciate is pepper or something equally strong.

Many diseases are detrimentally affected by the ingestion of pepper. Rosacea is an excellent example of a disease that reacts unfavorably to the ingestion of pepper or alcoholic

stimulants. Many patients will tell you that a glass of wine will set their face in a blaze.

Erythematous eczema of the face is another good example. In this disease the relationship between functional disturbances of the gastro-intestinal tract and the skin affection is often most marked. I refer here to the type depicted in Louis A. Duhring's Atlas of Skin Diseases, where the skin is red and desquamating, and the natural lines of the skin are accentuated. The eyes are sad and tired looking, as if from lack of sleep, and the corners of the mouth drawn down, giving the man the appearance of invincible melancholy. If at all observant, it is likely that this person has found that indulgence in peppers, spices, alcohols, and the strong nerve stimulants such as tea and coffee, are followed by an attack of cutaneous irritation.

Not long ago a young man applied to me for the relief of a tantalizing pruritus. I had long previously treated the father for a severe papular eczema of the face. This was not the sole trouble the father had, for he was highly nervous, had a florid face, and was addicted to drink. The son was of the same tense high-strung type as the father, and his belly had two large scars on it, resulting from an operation for appendicitis. The fact of appendicitis was itself a sign of intestinal irritation, inflammation of the appendix being only the highly dangerous part of a much more extensive catarrhal inflammation of the bowels, just as mastoiditis is the highly dangerous point in a catarrhal affection of the ear. By taking out the appendix, however, the catarrhal trouble in the rest of the intestines is not cured. My hypothesis therefore was that the pruritus was due to intestinal irritation, and that possibly the predisposition to it was inherited, and he was treated accordingly. Among other things he was set on a diet in which pepper was interdicted. Shortly afterwards he returned saying that for some time he had been better, but that the preceding Sunday night he had had a severe attack of itching, which had prevented sleep. On questioning him he admitted eating curry that evening for dinner, and affirmed that he did not know that curry is pepper. It may be that the curry did not cause the attack of itching, but its ingestion occurred at the right time for it to have had this effect. This unperceived enjoyment of pepper and other condiments should always be borne in mind in ascertaining the habits or directing the diet of even amenable patients. In the first place people are not used to thinking along these lines. I remember one time speaking very earnestly to a thoughtful woman on the evil effects of pepper, as particularly emphasized in a member of her own

family. The day following this conversation I lunched in her household, and we had sausages loaded with pepper. Then again many dishes contain pepper so artfully masked as usually to escape detection. An intelligent man suffered exquisitely from neurotic eczema, and I had repeatedly told him in a general way to abstain from pepper. On one of his visits I handed him a list of dishes apt to be highly peppered. On reading it he remarked reflectively that he had just eaten chowder in a restaurant. Patients should also be told to beware of purées or thick soups, as such dishes, that otherwise taste flat, have often pepper added to them to impart a warm full taste, agreeable to the palate. While delightful to the palate, and warm and comforting to the stomach, farther down the alimentary canal they may set every one of the valvulæ conniventes, or winking valves, violently blinking.

I know of no better demonstration of where an eczema patient should not eat, than a good free lunch counter. You there see savory Spanish stews, stuffed peppers, strong cheese, baked beans loaded with pepper, well spiced sausages and pickles. There will also be salt meats, and many foods impregnated with vinegar. The point of view of the proprietor of a free lunch counter is well illustrated by the following story from Rabelais:

A prince wishing to conquer a king in whose country he had landed, sent him a box containing a very hot confection. The king partook of these condiments, and straightway his mouth began to burn. To allay his throat his attendants put a funnel into his mouth and poured down a cask of wine. The courtiers seeing the king with such a magnificent thirst, also partook of the confection, and as a consequence drank copiously, and soon became drunk. The common people seeing their king and nobles all dead drunk, thought it the usual preparation for battle, and got drunk, too. The inebriated town was attacked at the psychological moment, or rather at the unpsychological moment, as the inhabitants were unconscious, and readily fell a prey to the enterprising prince who devised the scheme.

The following is a list of some peppery foods and condiments which should be avoided by those sensitive to the drug:

Black pepper.
White pepper.
Red pepper.
Ground chili.
Paprika.
Pepper sauce.
Tabasco sauce.
Chili sauce.
Chutney sauce.
Most variety of pickles.
Baked beans with tomato sauce.
Salads are apt to be full of pepper.
All Spanish dishes, as tamales and enchilladas.
Most Hungarian dishes.
Worcestershire sauce.
Welsh rarebit. Purées.
Chowder eaten in a restaurant.
Dressing of fowls.
Mustard through all its forms, (mayonnaise for instance) is equivalent to pepper.

Catsup.
Chow chow.
Curry.
Canned tomatoes with red peppers.
All dishes a la Newburg.
Stews and hashes may contain pepper.
Hashed potatoes are usually full of pepper.
Sausages of all kinds.
Many escolloped dishes.
Ginger.
Cloves.
Oyster cocktails.

Pepper is a favorite method of hiding over-cooking, and is so used by many cooks. If a cook has the "pepper habit," brown some cornstarch, take most of the pepper out of the pepper box, and add the browned cornstarch. These lazy cooks seldom taste their dishes in the preparing, and the ruse escapes detection.

From what I know of human nature, I am of the opinion that the reading of the above list will rather serve as an incentive to eating pepper than as a deterrent.

It should always be borne in mind that pepper is a drug, and a very irritating stimulant one at that. It is a drug that is taken for fun, and one must be always on one's guard about things taken for sport. It is a wise rule not to try to get too much fun out of any drug. Men who try to do so, usually find their path to lead straight to a physician's office, and it is an old saying that "He who dwells with doctors dwells in misery."

INHERITED SYPHILIS.*

By John Ferguson, M.A., M.D.
Physician to Toronto Western Hospital.

This subject is of sufficient importance to justify the attention that can be given to it in a short article. It is now admitted that the spirochæta pallida, discovered by Schaudinn and Hoffman in 1905, is the cause of the disease. Mr. Jonathan Hutchinson pointed out many years ago, and long before the organism had been discovered, but assumed to exist, that, unless a child brought the germ with it into the world, or got it very soon after birth, it did not inherit nor acquire syphilis. If either of the parents had previously suffered from syphilis, the child might inherit a weakly constitution, though not the disease.

1. The Terms Employed.

Of late there has been a good deal of discussion on the terms, Congenital Syphilis, Hereditary Syphilis, and Inherited Syphilis. The third is the more accurate expression. The term "congenital" is not always true when applied to this disease, as the child may be syphilitic, and yet not congenitally so. The term "hereditary" should be employed for such conditions or states as may descend through a number of generations, which is certainly not the case with syphilis. The term "inherited" means that the child is born with the disease, or acquires it at birth, manifesting the disease while still very young. This is, therefore, the most accurate term.

The cause of syphilis is a special kind of protozoon, of spiral form, with a flagellum at each end. It is very mobile, with three forms of motion—a lashing, spiral, and to-and-fro. With Giemsa's fluid, it stains a pink color, while the spirochæta refringens stains a dark purple with the same fluid.

2. Mode of Transmission.

It is now established that a syphilitic father cannot impart his disease directly to his offspring. It is not possible for the spirochæta to be present in the spermatozoon, grow and multiply in it, and not destroy it. Further, Colles's law has borne the test of time, that a syphilitic child cannot infect its mother, whom it nurses. It would appear as quite clear that inheritance is invariably through the syphilized mother.

If the disease is active in the mother, the infection may pene-

*Abstract of a Post-Graduate Lecture delivered at the Toronto Orthopedic Hospital.

trate into the placenta and infect the fetus, often causing its death. In other instances, where the disease is not very active, either through time or treatment, the spirochæta may not thus reach the placenta and fetus. At the time of labor, however, as the placenta begins to separate, its surface may become infected, and the infection find its way to the fetus through the umbilical vein. In such cases, the exanthematous stage may occur a few weeks to two or three months after the birth of the child. The separation of the placenta corresponds with the chancre in ordinary cases.

It was once held that, in Colles's law, the mother had acquired the disease from her child *in utero*, but it has been shown that this is not possible. The only remaining conclusion is that the mother is first affected, and then gives the disease to her child through the placenta during gestation, or at the time of birth, by the separation of the placenta.

Whether the disease can be transmitted to the third generation or not is still a disputed question. Mr. Hutchinson collected eight instances of persons who had inherited syphilis, but whose children did not show any evidence of the disease. The late Dr. R. W. Taylor recorded three instances of what was regarded as descent to the third generation, and Edmond Fournier has collected 59 instances of what he regards as transmission to the third generation.

It is well known that a person as old as 25 years may show active secondary symptoms from inherited syphilis. This fact would render the transmission to the third generation a possibility on purely scientific grounds. But more evidence is required before a definite conclusion can be arrived at.

3. General Results.

The mortality among syphilitic children is very high, and the morbidity still higher. It must be remembered that the sores about the child's mouth and anus are highly infecting, as the discharges from these contain the spirochætes. Among the symptoms may be mentioned brown macular spots, pompholyx, stomatitis, snuffles, condyloma, wasting, enlarged spleen and liver, epiphysitis, bone nodes, bent bones. In the earlier years the tibia may become thickened and painful. At and after the sixth year there is marked liability to flattened nose, square forehead, lines from the mouth, short figure, and pallor. During the second dentition, the three signs pointed out by Mr. Hutchinson, namely, notched incisor teeth, interstitial corneitis, and syphilitic deafness, are to be expected. There may be destruc-

tion of the hard or soft palate, ulceration of the skin, caries of bones, and a characteristic form of dactylitis.

4. Lesions of the Bones.

In the bones, some very characteristic lesions are found in cases of inherited syphilis. One of these is epiphysitis. This is often an early symptom of the disease, and gives rise to what has been called pseudo-paralysis. It is present in from 10 to 15 per cent. of all cases. It is contended by some that there may be a syphilitic pseudo-paralysis without the presence of epiphysitis, as no tenderness nor swelling can be detected at the ends of the bones in some instances. Such examples of paralysis, whether with or without the epiphyseal bone lesion, usually do well under proper treatment.

The long bones, especially the tibia, may present marked deformity, as irregular enlargements, or a certain degree of curvature, caused by chronic osteo-periostitis. This condition is known as syphilitic osteitis deformans. There may be other stigmata of the disease, but, in some instances, this almost painless deformity of the bones may be the only manifestation present. The enlargement may be quite massive, or confer upon the anterior border of the tibia a sabre-like appearance. These changes in the long bones are frequently associated with mental defect in the children. This form of syphilitic osteitis deformans should be distinguished from Paget's osteitis deformans. This may be done by noting that, in the syphilitic disease, it comes on while the patient is quite young; that it is not painful; that it improves under anti-syphilitic treatment; that the tibia most frequently suffer most; there are often bosses on the bones; there are usually other indications of syphilis; there is no tendency to malignancy. In Paget's osteitis deformans, there are usually severe pains; the femora are often affected; the patients are older; there is a tendency to malignancy, and anti-syphilitic treatment is not effective.

In the bones of the skull there are some important changes found. On the frontal and parietal bones, there may be deposits of vascular, spongy bone. These bosses may also occur in rickets, and are indistinguishable from each other, though anatomically they differ. Craniotabes, or thinning of patches of the cranial bones occurs mainly in syphilis, but may also be met with in rickets. This is also frequently associated with laryngismus stridulus, but this again is common in rickets. The absorption of the cranial bones may be very extensive.

5. Changes in the Teeth.

In the teeth there are certain deformities in the permanent set that merit consideration. The lower central incisors are notched, and the upper incisors are diminished in size, and usually screwdriver-shaped. These changes are due to an arrest in their development, which was pointed out long ago by Mr. Hutchinson. There is also a lack of development in the sides of the crowns, rounding off the cutting edges. The notching is caused by the arrest of development of the central columella, while the rounding is due to defect in the lateral columellæ, there being three of these for each incisor. Many years ago, Mr. Henry Moon described a deformity in the first molars. These are reduced in size, and dome-shaped, caused by a dwarfing of the central tubercle of each cusp. These changes may appear in the molars, though the incisors are normal. The teeth of children with inherited syphilis are apt to be rather far apart, owing to the lack of development in their lateral columellæ. The characteristic notching has been noted a few times in the temporary incisors, so that the rule that it is found only in the permanent teeth does not always hold good. The notching has also been noticed a few times where there was no taint of syphilis.

6. Diseases of the Joints.

Inherited syphilis may cause very serious disease of one or more joints. Synovitis may occur. It sometimes attacks the joints irregularly, and sometimes symmetrically. This affection of the joints has been observed by many, but notably by Dr. George F. Still and Professor Lorenz.

A rather obscure, but very interesting, form of joint affection in syphilis of children is a form of osteo-arthritis, or the osteochondritis syphilitica of Wegner. In this complication the joints usually become affected successively; but the disease does not appear to be progressive in character, leading to the destruction of the joints. It generally becomes stationary, even though treatment has not been resorted to. There is some thickening of both the bones and the soft parts. As the result of these changes, there is limitation of movement, which may be permanent, with a certain degree of enlargement. Under the best of hygienic conditions and the most careful treatment, these changes are very chronic and obstinate. When fibrous adhesions are formed, the joint is most likely permanently impaired. There is proliferation of the cartilage cells, ossification at the epiphyses, and thickening of the perichondrium and periosteum.

7. Visceral Manifestations.

Enlargement of the spleen is one of the most constant of the many visceral lesions. It is met in at least 50 per cent. of all the cases. Some put its occurrence as high as 75 per cent. When this is met with in children too young to be the victims of rickets, it is a valuable aid in forming a diagnosis. The poison of syphilis produces some irritation of the spleen, as distinct inflammatory changes have been found in the organ and its capsule. In later stages there may be the formation of a good deal of fibrous tissue, both in the capsule and throughout the spleen. Gummata are very rare in this organ.

Nephritis has been noticed in connection with inherited syphilis by Drs. Guthrie, Sutherland, Holt, Walker, Massalongo, Stroebe, Carpenter, Sawyer, and others. There seems to be very little doubt now remaining but that syphilis may be a cause of nephritis, both in the child and the adult. The form which the disease assumes is that of the interstitial type, with a certain amount of parenchymatous changes. In recent cases the stroma of the kidney is infiltrated with small cells, in areas. There is also the formation of new connective tissue. The small arteries around the glomeruli tend to thicken. Catarrhal changes may exist in the tubes, which may also contain hyaline casts. There may be also minute hemorrhages into the substance of the kidney. In the advanced cases the organ presents all the appearances of the granular contracted kidney of the adult, with its distorted shape, adherent capsule, dilated pelvis, thin cortex, thickened blood vessels and glomerular capsules, obliterated tubules, atrophied glomeruli, and tubular cysts. Dr. Bradley, of Manchester, in 1871, recognized the condition and successfully treated it. This is the first case on record. The frequency of this complication is not known, but Speirs gives it as 10 in 34 children with inherited syphilis.

The supra-renal glands suffer about once in every eight cases. The changes have been studied by Virchow, Hecker and many others. There may be an increase in size, due to cell infiltration and the formation of connective tissue. This new growth is very liable to undergo fatty degeneration. The organ in time may be changed to a quantity of oily-looking matter and granular debris.

In the liver, similar changes have been found. At first there is a cellular infiltration, and the formation of some new connective tissue. This causes more or less enlargement of the organ, as is the case in the early stage of syphilitic disease of the spleen

and adrenals. Later on these changes give place to atrophies, and there may ensue a genuine fibrosis, or cirrhosis of the liver. This cirrhosis of the liver may be coincident with the enlargement of the spleen.

The heart may suffer in various ways from inherited syphilis. Myocarditis has been observed a number of times. The endocardium may also be affected. New formation of muscle has been met with somewhat in the same way as new formation of bone, as the result of irritation produced by a syphilitic lesion. The small arteries of the heart may be thickened, and there is sometimes found a well-marked cell infiltration into the myocardium.

The peritoneum may become involved in disease. There are a few cases on record of infants suffering from peritonitis which appeared to be due to syphilis. The tenderness and ascitis disappeared under appropriate treatment. Cirrhosis of the liver, with abdominal ascitis, has been met with in the fetus *in utero,* as in the case reported by Dr. Naish, of Sheffield, where the intestines were matted together, the liver showed intercellular cirrhosis, there was ascitis, and the peritoneum presented the appearance of chronic inflammation. West, in his diseases of children, mentions the case of a syphilitic infant, whose abdomen became very tender and distended with fluid, both of which disappeared under treatment.

In the mouth, pharynx, naso-pharynx, and larynx, there may be deep-seated ulceration and necrosis of tissues. The cartilages of the larynx have been known to be destroyed more or less completely. The lumps have been found in a state of splenization. The capillaries were dilated, and the alveolar walls thickened. The alveoli were stuffed with cells. The well-known snuffles require no special explanation. It is caused by a syphilitic catarrh of the mucous membranes, a specific rhinitis, with infiltration and thickening of the tissues. This condition is found in about 70 per cent. of all cases. It may occur in other conditions, such as ordinary coryza, among idiots and Mongols, when adenoids are present among the very young, etc. The snuffles may pass away in a few weeks or months unaided by treatment.

Including the testes and ovaries with the viscera, it may be mentioned here that these organs are occasionally involved. They undergo the usual changes of cell infiltration and new connective tissue formation, to be followed later on by atrophy and cirrhosis, and the development of the condition known as infantilism, if the orchitis or ovaritis is double, at a period

when the sexual characteristics should be pronounced. Syphilitic orchitis happens in about 7 per cent. of all cases of the inherited disease. These organs have also been known to be the seat of gummatous formations. These morbid changes may occur during the early weeks of life. Orchitis in an infant is very indicative of syphilis.

8. Adenitis.

The victims of inherited syphilis often suffer from enlargement of the lymphatic glands. This condition is not of much value as a diagnostic sign, as many children present enlarged glands who have no taint of syphilis. The condition, however, may put one on his guard, especially if the epitrochlear glands be found enlarged. The enlargement of the glands becomes important corroborative evidence if there be concurrent keratitis, osteitis, arthritis, or skin lesion. When a group of glands enlarge considerably from a syphilitic cause it is usually a late manifestation. This is the opinion held by such authorities as Holt and Hutchinson.

9. Skin Affections.

Some form of skin eruption occurs in 70 per cent. or over of cases of infantile syphilis. The true syphiloderms are frequently accompanied by ordinary skin lesions. There may be a common eczema about the ears, and a true syphilitic psoriasis on the face. If the care of the child is bad, the various syphilitic skin affections, through wet, dirt, and irritation, may come to so resemble ordinary skin inflammations and eruptions as to be quite indistinguishable.

The most usual forms of skin affections caused by inherited syphilis are roseola, psoriasis, erythema, rhagades, pemphigus, hemorrhagic exanthemata, acne, impetigo, ecthyma, and ulcerations. Of the foregoing, it may be said that the psoriasis is very characteristic. "It consists," says Osler, "of bright-red or copper-colored, infiltrated areas on the palms of the hands and the soles of the feet, covered by white, dry scales, which are easily detached, leaving a collarette at the periphery."

The erythema may be accompanied by true ulceration, causing permanent scarring. When the rhagades or ulceration is caused by gummata, the process is usually rapid, a few days may cause great loss of tissue; the edges are sharply cut, irregular and serpiginous; the ulcers are usually deep; the scar is at first brown, becoming white from centre to periphery, and the ulceration is generally a symmetrical one.

Pemphigus neonatorum is a very characteristic lesion. It is

usually on the palms of the hands and soles of the feet. It may be present at birth, or appear soon thereafter. It is at first a bluish-red infiltration, but vesicles and bullæ soon form. The epidermis then becomes white, while the true skin beneath is of a port wine reddish color. The exudate soon becomes purulent.

The other skin affections, the acne, impetigo, ecthyma, or hemorrhages, are not so pathognomonic, but, taken with other conditions, may aid in the diagnosis.

10. The Eyes and Ears.

The eyes are frequently affected at an early stage of the disease with choroiditis, or choroido-retinitis. The eyes may be seriously damaged as the result of these inflammations. Iritis is much less common, but may appear during the eruptive stage. Keratitis seldom appears under the sixth year; but from this age to that of puberty, or later, it is not uncommon. It is the most characteristic eye disease met with in inherited syphilis. It begins as a diffuse haziness in the centre of one cornea. There is dimness of vision and irritability of the eye. This haziness is made up of a number of minute punctate deposits, and in a few weeks the whole cornea is involved, giving it a cloudy, milky, whitish, or ground-glass appearance. The ciliary region is congested. There is fear of light. The second eye soon passes through the same changes. Eye symptoms appear in some form in about 25 per cent. of all cases.

The ears are subject to certain syphilitic inflammations. Otitis media may result from an extension of disease from the naso-pharynx. Later in life, or during the second dentition, there may come on a steadily progressive deafness of labyrinthine origin, which may end in complete loss of hearing.

11. The Nervous System Complications.

In no part of the body does inherited syphilis work such ravages as in the nervous system. The disease attacks this system in several ways, and the consequences are far-reaching and disastrous. Epilepsy, convulsions, tabes dorsalis, paresis, arrested mental development, and meningitis are among the progeny of inherited syphilis.

As pathology becomes clarified by better knowledge of morbid changes and the various infections, it becomes established that syphilis is not often a cause of pia-arachnoid meningitis; but there are cases on record, with attached autopsies, which confirm the belief in the possibility of its occurrence. Thickening and adhesions of the pia have been found that point clearly to men-

ingitis as the cause. Then, also, there are some known cases of hydrocephalus due to syphilis, such cases depending upon a prior meningitis. Sir Thomas Barlow has recorded a typical case of syphilitic meningitis.

The brain may suffer in inherited syphilis in several ways. The cortex may undergo sclerosis; there may be hydrocephalus, or vascular disease, causing hemiplegia. These cerebral manifestations are more frequent than is generally supposed. Dr. G. F. Still states that 10 out of 15 cases of inherited syphilis under his care had some form of cerebral lesion. Dr. G. E. Shuttleworth, formerly of the Royal Albert Asylum, uses the following language: "Degenerative changes due to this cause may, indeed, manifest themselves early in life, and give rise to cranial osteitis, meningeal inflammations and eclampsia, epileptic and paralytic symptoms so often associated with mental defect in children, and frequently assigned as its cause, though more correctly to be regarded as links in the chain of causation."

The most characteristic form of mental disturbance resulting from inherited syphilis is that form described by Dr. Clouston in 1877, under the term, juvenile general paralysis. It is no longer necessary to argue that this form of mental disease is due to syphilis. Such authorities as Mott, Watson, Shuttleworth, Ferrier, and others are all agreed upon this point. Dr. Mott says that it is necessary to look into the family history with very great care. "It is remarkable how often one found absolutely no signs of syphilis on the body of a juvenile paralytic patient suffering from general paralysis, whereas brothers and sisters showed well-marked signs." Dr. Shuttleworth again puts the case thus: "I am inclined to think that inherited syphilis is a more frequent factor in the production of mental defect and abnormality in childhood than can be demonstrated from the institution statistics I have referred to, and to agree with Fournier that many cases of impaired mental development, such as are met with in children relegated to special schools, have their origin in an inherited syphilitic taint, normal brain development having been interfered with by osteitis causing cranial thickening, by meningeal indurations, or by localized cerebral sclerosis."

Juvenile tabes is another disease of the nervous system that owes its origin to inherited syphilis. A man would not be living up to the knowledge of to-day who took any other view of its origin. This disease occurs about once to every ten times we meet with juvenile general paralysis. All the evidence proves that juvenile tabes follows syphilis, inherited, or contracted in

the very early years of life. In the inherited form of syphilis, tabes comes on earlier in life, as a rule, than when the syphilis is acquired shortly after birth. Tabes, following acquired syphilis in the young, is much less frequent than tabes as a sequel to inherited syphilis, perhaps in the ratio of about 1 to 8 or 10. It occurs with about equal frequency among boys and girls. This is accounted for by the fact that, while syphilis is much more common among men than women, the disease is of about equal frequency in the two sexes when it is inherited. This explains why as many girls suffer from juvenile tabes as boys. The symptoms are those well known and classical to tabes. In its clinical features, there is no sign or symptom which occurs in the adult tabes that has not also been described in juvenile tabes. These views might be fortified by quoting from such writers as Ferrier, Nonne, Kutner, Dydynski, Mingazzini, Marburg, Kalischer, Lasarew, Hirtz, Alzheimer, Skala, Raymond, etc. Juvenile tabes must be sharply distinguished from pseudo-tabes caused by multiple neuritis and Friedreich's disease.

12. Diagnosis.

An early diagnosis of inherited syphilis is of prime importance, from the standpoint of treatment. In at least 75 per cent. of all cases, the symptoms, more or less complete, appear within the first three months, and in about one-half within the first four weeks. By being on the alert for the many complications, as already mentioned, there need not be many cases overlooked. The diagnosis is already summed up in what has been said. The serum reaction may soon prove a great aid in diagnosis.

13. Treatment.

The treatment of syphilis in the young is simple in theory, but often very difficult in practice. Many of these patients are in an extremely debilitated condition.

The first thing is to secure the best hygienic conditions possible under the circumstances.

The feeding should be looked into. There is no danger to the mother to nurse her own child, even though she show no symptoms herself. Colles's law may be relied upon. If the mother cannot nurse the child, it cannot be nursed by any other on account of the risk of imparting infection.

With regard to drugs, there is but one, namely, mercury. Here, as in the adult, the iodides are useful in the later stages, but mercury alone is curative for all lesions containing infection, or the organism of the disease.

Grey powder in doses of half a grain three times a day may be given to a baby a few weeks old. If any diarrhœa occur, a little aromatic chalk powder may be ordered with it, or minute doses of compound ipecac powder. Some prefer calomel in doses of one-twelfth to one-sixth of a grain, two or three times daily. If this irritate the bowels, small doses of opium may be combined with it. Liquor hydrargyri perchloridi may also be employed in doses of 2 to 4 minims thrice daily. This may be combined in various way to lessen the risk of diarrhœa.

When prompt action is required, owing to the severity of the symptoms, inunction should be had recourse to. A piece of mercurial ointment of about 15 grains should be gently rubbed into the skin over the abdomen, the inner aspect of the thighs, or the arms, in the evening, and a flannel bandage applied till morning, when it should be carefully washed off with warm water. If used in this way, the results are excellent, and there is but little risk of dermatitis.

The intramuscular injections and the fumigation methods of administering mercury are not very suitable for children, and are not so easily managed as those already mentioned.

The duration of treatment is of much importance. So high an authority as Mr. Hutchinson advises that it be discontinued as soon as the symptoms disappear. But as this might happen in a few weeks, the time must be regarded as too short. It may be laid down as a rule that treatment should be continued for about one year, watching the child with the closest attention, so as to guard it against any untoward effects from the mercury.

The combined treatment with mercury and the iodides is recommended by many. Where it is desired to secure quick results, the combination is often more effectual than mercury alone. It must be borne in mind, however, that the iodides do not cure syphilis.

Atoxyl is now claiming much attention, and may soon take a leading place in the therapeutics of syphilis.

The concurrent marasmus and debility calls for careful feeding, change of air, tonics, cod liver oil, and all means at our command to restore the health of the child.

TORONTO HOSPITALS FOR CONSUMPTIVES.

By W. J. Dobbie, M.A., MD.,C.M.

That there is, within a few miles of Toronto, a hospital specially devoted to the care and treatment of advanced cases of tuberculosis is, perhaps, a fact that is known to every physician in the Province. It may be doubted, however, if even a small percentage of the members of the medical profession have any adequate idea of the nature of the hospital, either as to its buildings, equipment, maintenance, management, methods of treatment, or results. For, as a matter of fact, it is not at all an uncommon thing for those who visit the institution to admit that they expected to find merely an old farmhouse with a lean-to attached—a sort of makeshift accommodation for possibly a dozen or so dying consumptives. What they actually find, however, is something vastly different. They find in reality two up-to-date hospitals capable of accommodating between eighty and ninety patients, with many comforts and conveniences not to be found in some of the older and more pretentious institutions.

The site on which these two institutions, the Toronto Free Hospital and the King Edward Sanatorium, are built is a naturally beautiful one. Near the banks of the picturesque Humber, about four miles from Toronto, and at a considerable elevation above its bed, it presents at all seasons of the year a very attractive outlook. Being about half a mile from any public highway, the air is comparatively free from dust and the surroundings peaceful and pastoral, and in every way such as to facilitate the enjoyment of a quiet, restful life.

At the Toronto Free Hospital a pre-existing house has been converted into an administrative block and residence for nurses. Ward accommodation for some seventy patients has been added, the initial cost amounting to some $40,000. The King Edward Sanatorium, on the same site but some distance away, comprises three entirely new buildings, erected at a cost of $30,000, and provides accommodation for fifteen patients, paying the full cost of maintenance. In these various buildings are provided the following:

Administration Quarters.—Business offices, physicians' offices, lady superintendent's office.

Staff Quarters.—Staff dining room, pantry, doctors' study, nurses' sitting room, nurses' dining room, bedrooms, and bathrooms, the latter being equipped with shower baths.

Medical Quarters.—Examining room, dispensary, two throat rooms, clinical laboratory, clinical microscopy room, crematory room, autopsy room, fumigating room, and morgue.

Nursing Department.—Nurses' offices, diet kitchen, sewing room, supply rooms, linen rooms.

Patients' Quarters.—At the T. F. H. C. accommodation for some seventy patients, including infirmary wards, women's ward, pavilion for men, two shacks, ten cars, and three tents. At the K. E. S. C., fifteen private rooms. At both places all necessary sitting rooms, dining rooms, pantries, bathrooms, etc., are provided.

The lighting throughout is by electricity, there are two steam heating plants, and a complete septic tank system of sewerage. The water is supplied from two spring wells, by windmill, electric motor, and gasoline pump. The latter is a most up-to-date system, the pressure in the pipes being secured by compressed air, while the reservoirs are in the basement. Two Bell telephones, with city connection, as well as a local phone system, facilitate communication.

The staff consists of two resident physicians, a lady superintendent, and a bookkeeper. There is also an honorary consulting staff.

Owing to the fact that graduate nurses are, as a rule, afraid to nurse tuberculosis, and because, as well, it is necessary to give them special instructions in any case, a training school has been established in connection with the hospital, covering a two-year course in general nursing. There are ten nurses on the staff, and the work being done is equal to that in any other institution.

The patients are all under the special care of the physician-in-chief, who regulates, as he may consider necessary, the life of each individual under his charge. He has a general supervision of all their movements, and makes, from time to time, regulations as to exercise, rest, sleep, diet, etc. In all respects patients receive every care and attention, but in no case are patients allowed to deviate from the regulations laid down by the physician in regard to their case. Special attention is paid to diet. Good, plain, wholesome food, carefully prepared, well cooked, and daintily served, with such delicacies as may be advisable, is provided. The menus are written daily, and are kept on file. A record is kept also of what is sent to each bed patient at each meal. In the general dining room a report in writing is made by the patients at each table at each meal. These are also kept on file. All patients able to be up, but requiring special care in diet on account of gastric or other disturbances of digestion, are

placed at a special table, under the supervision of a nurse, with in some cases a special diet list. Written reports in these cases are furnished by the nurses twice a week.

Every facility is afforded for taking the open-air treatment. At the K. E. S. C., the majority of the patients remain outside both day and night, their beds being wheeled in by the orderlies for meals and treatment only. All the standard treatments are used, including the various serums and tuberculins as may be indicated. Complete records are kept on file of all cases.

Lectures are delivered to the patients at regular intervals on various subjects of a practical nature in connection with the disease and its treatment, and in this way an endeavor is made to educate the patients, so that they may inform their friends and the locality in which they live in all matters pertaining to the disease.

As descriptive of the points which may be observed by the casual medical visitor, it may be permissible to quote some sentences from a descriptive article written by the late Sir W. H. Broadbent, M.D., F.R.S., and published in the *British Medical Journal* last year. In it he says, among other things: "The hospital is conducted on open-air principles and is bright and cheerful. Three women slept on a balcony all through last winter. A detail of some interest and importance is that the beds are not close up to the walls. If dust accumulates anywhere in a hospital ward, or ordinary bedroom, it is under the head of the bed, and a clear space here, easily accessible to the moist duster, is an excellent idea. The spittoons are small, square, flat tin boxes with a handle, within which is a close-fitting box of stiff moisture-proof paper. They are all numbered and the paper and tin correspond. The inner paper box is removed at regular intervals and a note is taken of the amount and character of the contents. Perhaps a specimen of sputum is withdrawn for examination, after which the paper box and its contents are burned. The examination of the expectoration is facilitated, and there is no need for an elaborate apparatus for disinfecting the spittoons. The handkerchiefs are made of a soft, thin cotton fabric called, I think, butter cloth, and are cut off from the piece in the institution. They cost less than the washing of an ordinary handkerchief and are burnt. The administration and organization are evidently most efficient. Spray and pulverized liquids and powders for the various parts of the air passages are administered by means of compressed air, operated, as the trans-Atlantic term is, by a minute electric motor situated in the corner of the room. The force of the current of air can be regulated and the spray

can be given to several patients at once under the supervision of the resident medical officer, which is a great advantage. They sit in a row on a form, each holding his own particular phial of inhalant, into which the compressed air is conveyed. Another interesting detail in the examination and operation room is that a disc of glass is suspended between the physician and the patient during throat examinations. It prevents the disagreeable and dangerous projection of particles of expectoration into the examiner's face, which often gives rise to suspension of the examination or operation, and it does not interfere with manipulation or with a good view of the mirror.

"The value of a hospital like this is not measured by statistical results, but surprising improvement often takes place in the worst cases, and many patients have so far recovered as to be fit to return to their homes without danger to their families."

During the three years since the hospital was opened there have been discharged 421 patients, of whom one was non-tubercular. In these 420 cases the following have been the results:

RESULTS IN PER CENT. FOR THREE YEARS.

	Far Advanced. 218 Cases. Per cent.	Advanced. 189 Cases. Per cent.	Moderately Advanced. 13 Cases. Per cent.	Totals. 420 Cases. Per cent.
Apparently cured....	..	1.6	13.0	1.3
Disease arrested.....	..	5.8	53.8	4.4
Much improvement..	6.9	44.3	30.8	24 5
Stationary.....	7.8	22.2	..	14.1
Failed...	17.4	7.9	..	12.4
Died.....	67.9	17.9	..	43.3
				100.0

From these figures the value of distinguishing between the advanced and the far advanced cases will readily be seen. As to the permanency of results, it is very difficult to speak with accuracy, because it is almost impossible to keep in touch with those who have been discharged. It is possible to say this much, however, that of those discharged during the last year some twenty are known to be at work regularly and to be enjoying good health. A number, moreover, are in better health at the present time than they were at the time of their discharge, notwithstanding the fact that they have been working and living under ordinary conditions for several months.

In conclusion, it may be said that a visit to these institutions will amply repay any physician, and will, perhaps, make it easier for him to advise patients coming under his care.

Selected Articles.

REPORT OF A CASE OF IMPACTED BREECH PRESENTATION TREATED BY HEBOTOMY.*

By Ralph H. Pomeroy, M.D., Brooklyn, N.Y.

Quoting from Menge, in the July, 1907, issue of the *Munchener Medicinische Wochenschrift*, on "Indication for Operation for Increasing the Width of the Pelvis": "The after-coming head is often brought down with difficulty, even in pelves with a conjugate between 7.8 and 8 cm. Hebotomy is indicated in diameters from 7.5 to 8 cm. in breech presentations." This note is quoted in endorsement merely of the following recent case of my own, delivered successfully after hebotomy, as I am ready to stand for the reasonableness of the procedure on the merits of the case alone. The statistics as to mortality in some hundreds of reported cases of hebotomy in Europe appear to run from 5 per cent. to 7 per cent. for the mothers, and from 15 per cent. to 20 per cent. for the children. In America the statistics of twenty cases collected by Fry, in 1907, gave 20 per cent. mortality for the mothers, and 40 per cent. for the children. I have not had opportunity to collate the later operative statistics, in this country, but it is my contention that the proper status of the operation is not determined by statistics covering cases in which the child has been already half killed and the mother's tissues maimed by ill-judged forceps application. Many cases come to the skilled surgical obstetrician too late in the history of the labor for him to do justice to either of the unfortunates. In such cases the effort to save the damaged infant by any means is likely to be to the disadvantage of the mother. It is a curious fact that we are at present at a stage of obstetric philosophy which purports to take an acute interest in the value of the child's life, and yet in practice that interest is spasmodic and eratic. Why should the value of the fetal life loom large in a positive case of contracted pelvis and yet such a life be allowed to fade away unconsidered under the pressure efforts of a dry labor? Why should it be deemed an ordinary and excusable catastrophe for the child to perish in the course of a prolonged second stage due to posterior position of the vertex? These oc-

* Read before the New York Obstetrical Society, Jan. 14, 1908.

currences are common enough, as well as an array of disasters incidental to high forceps operations which are accepted as mere events. The statistics of the causes of still-birth are, to the best of my knowledge, meager and unsatisfactory, but I am convinced that the lowering of fetal mortality in obstetric practice in general deserves more attention from the experts of the profession. Yet, they themselves should be bold enough to sacrifice a damaged infant in the interest of the mother's life and future health. A presumably non-viable child should be craniotomized even before death if the mother's interest positively demands it.

Passing from the consideration of the badly managed cases that come to be extricated from their difficulties, how shall the expert plan for the border-line disproportions? Logically, every relative disproportion case should be subjected to Cesarean section early in labor if we allow maximum value to the child's life. Yet the factors of a spontaneous or slightly assisted safe delivery, *i.e.,* the moulding of the head and the efficiency of the expelling forces, are in many cases so unmeasurable that medical history contains very many stories of prospective and prophesied disasters that have eventuated in easy labors. As long as we hold that the border-line case is entitled to a trial at natural labor, we shall occasionally see cases which have advanced to a point where logically a slight enlargement of the pelvic canal is the proper solution, assuming good surgical skill and surroundings. The "Walcher" posture is lauded as supplying an expedient for many such situations. This is doubtless true, but the amount of gain in the actual area at the obstruction girdle is so slight that this resource does not compare in efficiency with the enlargement of nearly all diameters available by section of the bone or joint.

These observations are made in defence of symphyseotomy, or hebotomy, whichever procedure may win out on its technical safety or efficiency, to be utilized only in certain selected cases of moderate disproportion between the head and the pelvis, where neither mother nor child have been subjected to obvious trauma, but where Cesarean section is contraindicated on account of the advanced stage of the labor or the imminence of infection.

Case Report.—D., married, Catholic, aged seventeen, in labor at term, was brought into the Methodist Episcopal Hospital by the ambulance at 11 a.m. January 4, 1908. Dr. J. E. Hatton, her attending physician, reported an impacted breech presentation with contracted pelvis. The patient had been in labor for twelve hours; the membranes ruptured for nine hours. No meconium had been expelled. She was a slight, small boned woman, already somewhat exhausted; pulse 120, temperature 99 degrees.

Inefficient pains recurred at from ten to fifteen minute intervals. Vaginal examination revealed both feet and the scrotum presenting at the level of the brim—position R. S. P. The diagonal conjugate was 10 cm. (equivalent to about an 8 cm. true conjugate). The cervix was thin and nearly obliterated. The external measurements were: intercristal, 27 cm.; interspinal, 23 cm.; external conjugate, scant 18 cm., a slightly flattened justo-minor pelvis. Measurements of the fetal head in the upper uterine segment gave a maximum diameter of 13 cm. The liquor amnii had apparently nearly all escaped. The bulk of the fetus was estimated as moderate and proportionate to the size of the mother, but the head probably of average dimensions. Fetal heart regular at 140 to 150. The patient was kept under observation for two hours longer with no definite change in conditions beyond slight further retraction of the thin cervix.

After consultation with the attending physician (who advocated Cesarean section) and with my associate, Dr. O. P. Humpstone, it was deemed reasonable to reject the Cesarean operation on account of the length of time the patient had been in labor with the membranes ruptured and the feet practically in the vagina. It was, of course, accepted that there was a possibility of successful delivery by the ordinary process of extracting the after-coming head. The conjugate, 8 cm., was within the range of many histories of spontaneous or forceps vertex delivery, or of the more advantageous traction and expression expedients available in delivery by podalic extraction. But in a justo-minor pelvis, an 8 cm. conjugate means a much smaller actual passage than a similar conjugate in a flattened pelvis of larger frame. On this reasoning it was voted that the extraction of the unmoulded head would be much facilitated and the child's chances of living would be greatly enhanced by a preliminary enlargement of the pelvic girdle. The recognized exceptional interest of the tenets of the Catholic Church in the life of the child was also given weight in the decision.

Preparations for hebotomy were made, with routine surgical precautions. Under ether anesthesia the vagina and introitus were manually dilated until the closed fist could be extracted. A vertical incision, an inch and a half long, was made over the left pubic bone, separating all structures to the periosteum. With blunt dissection and the finger, the bone was bared posteriorly and an extemporized carrying needle was passed downward and carried out through an incision external to the left labium majus, and the Gigli saw drawn through. There was very little bleeding from the upper incision, and a moderate

venous ooze from the lower. No apparent increase in the hemorrhage was noted on the parting of the bone, which amounted to a finger's breadth at once after the passing through of the saw. The pelvis was well supported by an assistant on either side. On withdrawing the saw the lower incision was packed with gauze. Seizing the feet, successively the lower limbs were extended and the trunk extracted slowly, rotating the occiput to the left anterior position in process of delivering the arms. The head was forced past the brim chiefly by rather severe suprapubic pressure by the assistants, flexion and guidance into the right oblique diameter being maintained by the operator. The difficulty of passing the brim was severe enough to justify the belief that delivery would have failed if the pelvis had not been severed. The perineum was torn to the second degree in the haste completely to extricate the head. The child was a male, moderately asphyxiated, responding promptly to artificial respiration and flagellation. It weighed 6 pounds 4 ounces. The cranial measurements were : O.M., 13 cm.; O.F., 12 cm.; S.O.B., 10.5 cm.; B. P., 9.5 cm.

The placenta was readily expressed. No post-partum hemorrhage occurred. In the exciting moment of the delivery of the head no accurate note was made of the amount of separation of the divided bone ends. The upper wound was closed with two buried fine chromic and two through-and-through silkworm gut sutures. The injured pelvic floor was also repaired *secundem artem*. Two overlapping broad strips of adhesive plaster, encircling the pelvis, secured against mobility of the severed bone. Removal of the pack in the lower wound showed that oozing was too free to allow safe suture closure; it was, therefore, repacked with gauze.

The patient made an almost uneventful recovery. Catheterization was necessary for several days. The pack in the lower wound was removed on the second day; stitches from the upper wound on the ninth day. The highest temperature was 101.6 degrees, on the third day; thereafter it ranged to 100 degrees in the afternoon until the end of the first week. The pulse continued between 100 and 120 for three days, since which time it has been from 80 to 90. Beyond the adhesive plaster retention no special management of the fracture was arranged for. To facilitate the lochial drainage, the head of the bed was kept elevated about eighteen inches. The usual edema of the left labium was noted. The bowels were kept open by saline laxatives administered by the mouth. One-sixth grain of morphin was given hypodermatically shortly after the operation. There-

after the patient was notably free from pain or discomfort, and successfully nursed her infant. She was allowed to sit up on the twenty-first day, to walk on the twenty-fifth day, and left the hospital on the thirty-first day after operation. Examination on dismissal showed the pelvic measurements unchanged. A slight sulcus could be felt on the anterior surface, and a ridge of callus on the posterior surface of the point of partition of the bone. There was no disability in locomotion.—*American Journal of Obstetrics.*

THE MEDICAL AND SURGICAL TREATMENT OF GALL STONES, THEIR SCOPE AND RELATIONS.

By John B. Deaver, M.D., Philadelphia, Pa.

The rise of surgery in the last two decades has brought many conditions, formerly left to the internist alone, into the sphere of surgery. Some, such as appendicitis and carcinoma of the gastro-intestinal tract, are by common consent ailments of a purely surgical character. Others are still upon the border-line.

Of the latter class, cholelithiasis is perhaps one of the most conspicuous examples. While the ideal treatment of gall stones is undoubtedly by surgical procedure, it would be folly to assert that all cases should be subjected to such treatment without delay.

Internists and surgeons have indulged in many bitter arguments and discussions on this score, each failing to realize that both have places to fill. The work of the one must supplement and at the same time be guided by that of the other. It is often only by careful observation and discrimination in individual cases that a choice can be made between the two modes of therapy; and an adequate comprehension of the relations of medical and surgical treatment of gall stones lies at the bottom of a sensible use of either.

One of the great strides in an understanding of gall stones brought about by modern surgery has been in the demonstration of the living pathology. While clinicians have been studying the symptomatology, and pathologists have carefully investigated the gross and minute pathology in the cadaver, the surgeon alone is able to show the disease in all the stages of its progress. He sees it in its incipiency in one case—when it has progressed somewhat further in another—and again in a third he sees it

when it has nearly reached a fatal termination. The latter condition, thanks to enlightened medicine and surgery, is daily becoming rarer and rarer, and were operative treatment promptly resorted to, need scarcely exist at all.

Consequently, it is the surgeon first and foremost who is privileged to appreciate what grave lesions and pathological processes may exist with few marked symptoms, and even these may be masked until the time when they will show their effect so quickly that no form of treatment will be of avail. He is able to see more clearly than the physician how the complications of gall stones—adhesions, cholecystitis, pancreatitis, etc.—make difficult the diagnosis and retard the treatment. It is the surgeon again who shows how often gall stones are present and underlie the symptoms when their presence can scarcely be suspected, and he it is who often demonstrates that cases formerly given up in despair of diagnosis, have as foundations of their illness either gall stones or their common accompaniment, adhesions of the upper abdomen.

Such conditions as these would naturally lead us to restrict the field of medicine and enlarge that of surgery in gall-stone disease; yet surgical treatment is by no means to be insisted upon for all patients. It has been well said by Kocher that gall stones do not "belong" to the surgeon. "They belong," he says, "in the first place to the patient, and if he prefers to retain them and to drink Carlsbad waters as well, he is quite within his rights to adopt this method, a line of treatment which, as is well known, is followed even by many surgeons when they themselves have gall stones. In the same way, if a patient prefers to wait in suffering and pain for a stone to work its way down *per vias naturales*, he is but enjoying his personal privileges. But," as Kocher adds, "at the present day the surgeon is certainly justified in telling a patient with gall stones that by an operation he can be quickly and safely cured of his trouble and be saved from eventual danger, more rapidly and more easily than by any other treatment."

There are, in the first place, many cases in which a patient has but one or at most two attacks of gall-stone colic in a lifetime, and in the interval is perfectly well. Medical treatment and hygienic watchfulness meet all demands in this class of cases; but at any moment acute symptoms may arise demanding immediate operation, and then both patient and surgeon will realize, perhaps too late, the greater safety and efficacy of operation in the interval between attacks.

Then again, many patients urgently in need of radical relief

show contra-indications to surgical intervention. Thus, persons who are markedly anemic or cholemic, who are very old, or who have some grave lesion of the heart, lungs or kidneys, should be operated on only as a last resort, if at all.

Many also in whom surgery is indicated refuse for personal or extraneous reasons to consent to operation. Such cases as these are entitled to medical treatment, although the surgeon should not conceal from them the added risk they run in postponing radical cure.

The medical treatment of gall-stone disease I will not discuss at length. It must aim to reduce inflammation of the gastro-intestinal tract, to favor elimination of toxins, and to guard against dietary and other indiscretions which cause exacerbation of the symptoms. This is the rationale, or rather what is accomplished in selected cases by the Carlsbad treatment, as carried out at these celebrated Springs. It must not be understood that the Carlsbad waters or the Carlsbad treatment dissolves stones or forces them through the bile passages, for such is not the case. Many people who take the journey to Carlsbad are not suitable subjects for this treatment; the consequence is that much of my time is occupied by operating on patients who have received this treatment with no results. The journey to Carlsbad is expensive and can only be entertained by those whose financial conditions permit it; therefore, he who has to earn his bread by the sweat of his brow must submit to the aseptic scalpel of the surgeon if he would obtain a cure. I have never had any evidence that the medical treatment in these cases is anything but palliative. The cure of gall stones by medication or the relief of their complications by drugs is, for the present at least, an impossibility. Reported cases of cures are generally found to be instances in which the stones have become quiescent, but have not been removed. Dr. A. O. J. Kelley, in studying 216 patients recently operated on by me for infections of the biliary tract, said (*Amer. Jour. Med. Sc.*, Nov., 1906): "We now know that the thousands of gall stones said to have been passed by the bowel after the administration of olive oil are merely masses resembling gall stones in outward appearance, and due to the basely deceptive powers of the olive oil acquired in its passage through the intestinal tract."

There is no doubt that much can be done by medical means to build up the patient, reduce the effects of cholemia and prevent recurrence of attacks of colic, not to mention relief of acute pain. But that gall stones can be broken up, dissolved, removed, or otherwise done away with by drugs, seems to me an idle

statement in view of the modern understanding of their nature and pathology. And especially unaffected by medical treatment must always remain the graver complications of gall stones, such as empyema of the gall bladder, adhesions, fistulae, etc. It must not be lost sight of that gall-stone disease can remain latent until Nature places the patient asleep in the everlasting rest of the grave. Granting then, that surgery is the preferable treatment in most cases, there is still the distinction between those in which the operation is one of immediate necessity, and those in which it is one of choice. In the former group we may include primarily cases in which we have marked infection, with cholangitis, or with empyema of the gall bladder, and those cases of obstruction of the common duct which show no tendency towards amelioration of the symptoms after a reasonable time of treatment—which I consider to be from two to three weeks.

In the latter class are cases of simple hydrops of the gall bladder, and ordinary cases of cholelithiasis in which the attacks are separated by longer or shorter periods of good health.

So also are those doubtful cases in which a diagnosis rests between one of gall-stone disease and a duodenal or gastric lesion. A realization of the number of cases in which prolonged indigestion of a more or less marked type, continued flatulence and vague epigastric distress and pain are due to gall stones or their sequels, has only of late years become more common. First and foremost among these sequels we must count adhesions of the upper abdomen as a result of gall stones. These impinge upon the neighboring viscera, the stomach and duodenum especially, and give rise to symptoms none the less annoying because they are vague and varying in character. Indeed, it is often the pericholecystic adhesions that give rise to the symptoms of which the gall-stone patient most bitterly complains. Bland-Sutton (Gall Stones and Bile Ducts, N. Y., 1907, p. 192) narrates that on two occasions where he has removed calculi from gall bladders he was unable to see the liver on account of adhesions.

The prevalence of "indigestion" and "dyspepsia" in gall-stone patients is shown by the fact that in a series of 182 consecutive cases of my own which I have recently analyzed, they were noted in more than forty per cent. of the total number.

When surgical intervention has been decided upon for the relief of one or another of the conditions mentioned, we can undertake it with much better spirit and hope of success than would have been possible fifteen or even ten years ago. In hardly any other branch of abdominal surgery has the recent progress been so rapid, and at the same time of so definite and

lasting a character as in the technic of operations upon the gall bladder and biliary passages.

Needless to say that the patient should be in the best possible condition when the operation is to be performed. Three days of preparation and stimulation where it is needed will often save as many weeks of anxiety after the operation, and will preserve many lives. The circulation should be in the best possible condition, and the excretory organs doing the best work of which they are capable. Anemia should be combated, and delayed coagulation dealt with as far as it can be by the agents which we have at our disposal. In the latter condition the chloride and lactate of calcium have been recommended. I have used them both, but am still very doubtful whether or not they have any real value.

Before the operation itself begins, and during its progress, the anesthetist fully shares the responsibility of the surgeon. Careful anesthesia is of the utmost importance, especially in operations so prolonged as those in complicated gall-stone cases are apt to be.

When the operation itself is considered, there are a number of points to which the surgeon must direct his attention.

1. The incision. In spite of the dictum of so accomplished a surgeon as Terrier, that Mayo Robson's incision is "not sufficient," it is that which I prefer, if any departure from the simple straight incision is demanded. I have never found fuller exposure than it gives, requisite. The use of a sand pillow or some similar support beneath the spine, so as to increase the dorso-lumbar convexity, as first suggested by Eliot, of Boston, is indispensable in most operations on the bile ducts. In very difficult cases the reversed Trendelenburg position may be a further aid in rendering accessible the deeper parts of the common duct or the hepaticus.

2. The field of operation when exposed must be carefully walled off from the abdominal cavity at large, to prevent the distribution of possibly infectious material in the peritoneal cavity. I use for this purpose both gauze pads and marine sponges. The former I introduce first, and the sponges above it. The sponges are of advantage in a two-fold way: (a) They absorb the bile or fluid rapidly and hold it well. (b) By their elasticity they may be made to act as retractors, especially when held by the hand of an assistant. The operation is much accelerated by introducing packs where they are to remain until the close of the operation. Many surgeons will have to remove their packs several times and again reinsert them, before they are

able to obtain sufficient exposure in the depths of the wound. This is usually due to carelessness, and to neglect of the surgical principle of beginning the insertion of the pads from one extremity of the incision. If the first pad be placed in the middle of the incision, the intestines will prolapse on both sides of it, and before a second pad can be placed the first will have become useless.

3. Adhesions must be dealt with and removed when they mask the field of operation, obstruct the biliary passages, or interfere with surrounding organs. They should be left alone when they are doing no damage, as their removal always takes time, and prolongs the operation, and may lead to consequences more grave than those to which their presence gives rise.

4. All the stones present in any one of the bile passages must be removed, unless they are far within the hepatic ducts and cannot be reached. A stone left in the gall bladder becomes a fresh focus of stone formation, while a small fragment in the ampulla or common duct of course invalidates the whole operation.

5. The gall bladder should be left when it is not so much damaged as to be functionally inactive as a bile reservoir, but must be removed when the contrary is the case.

6. After an operation on the gall bladder or bile passages, drainage should always be instituted in the presence of infection, and also in the majority of cases even when no infection is present. This renders the operation much more safe, and lessens the chance of subsequent complications. To me it is incomprehensible that surgeons should regard drainage of the hepatic duct through the common duct into the duodenum as sufficient in cases of infectious cholangitis. To drain one infected organ into another—the duodenum—I consider unsurgical in the extreme. In cases of severe pyelo-nephritis we are not satisfied with the drainage afforded through the ureter, into the bladder, which was probably the original seat of the disease—but we perform nephrotomy, and drain the kidney directly into the loin. So when the liver is infected, and we have a suppurative cholangitis, the only chance of safety lies in direct hepatic drainage through the laparotomy wound. The intra-hepatic pressure must be relieved, and this cannot satisfactorily be done by drainage into the intestinal tract.

7. After removal of the gall bladder in the presence of infection there should always be some chance for the drainage of bile, either by draining the stump of the cysticus, or preferably the hepaticus through the common duct, by means of a rubber

tube. When there is no such infection, and the gall bladder has been removed, a cigarette drain should be introduced to the site of the ligature on the duct, to guard against infection should the ligature slip or be thrown off by the *vis a tergo*.

8. There should be as little disturbance of the peritoneum as possible. If there is much trauma to this delicate membrane adhesions are sure to result. This must be borne in mind especially when introducing gauze drains. These, when used in the conditions under discussion, should always be covered with rubber dam or introduced through a split rubber drainage tube to prevent their sticking and forming adhesions.

This is but a brief outline of some of the cardinal principles underlying gall bladder surgery. Only those who do it can appreciate its difficulties and dangers, and no branch of surgery is less suitable for the tyro. The surgeon who does gall-stone operations must be prepared to do a gastro-enterostomy, or an entero-enterostomy—in fact, must be ready for almost any abdominal operation. Complications are often found to exist which tax the skill of any surgeon, and the avoidance of danger to surrounding organs or spreading infection is no easy matter.

The surgical treatment is by no means ended when the patient leaves the operating table. The after-treatment is in most cases simple. The patient is left alone and recovers. Stimulants may at times be needed, and their nature and indication will be evident. The drainage must be left in an adequate time—until it has fulfilled its function and can be removed easily.

Perhaps the most common post-operative condition that calls for prompt treatment is persistent vomiting. Early and often repeated lavage is its only treatment, and practically never fails to give relief.

The results of surgical treatment of gall-stones are universally acknowledged to be highly satisfactory. In no other branch of abdominal surgery is a final and permanent recovery more sure to follow operation. In a series of 182 cases of gall stones operated upon by me in the last few years, I have had a general mortality of 14.8 per cent. This includes besides simple cases—carcinoma, cholangitis, purulent cholecystitis, perforation of the gall bladder and local peritonitis. In selected cases the mortality is, of course, less. My later cases give a much lower percentage of mortality than the earlier ones, the improvement in the death rate going hand in hand with the improvement in technique and more careful selection of cases.

Much would be gained if the cases came to the surgeon earlier, when gall stones alone had to be dealt with and not their compli-

cations. The complications cause the operative failures and raise the mortality. Sepsis and infection before and at the time of operation have caused nearly half of the deaths in my cases.

It is evident then, that if the cases are sent to the surgeon in due time, and operated upon only when they are in suitable condition, few failures will follow proper surgery.

Medicine and Surgery must go hand in hand in the treatment of gall stones, each treating a separate class of cases, and always bearing in mind the fact that a surgical cure is the only final and definite one.—*Surgery, Gynecology and Obstetrics.*

Progress of Medical Science.

MEDICINE.

IN CHARGE OF W. H. B. AIKINS, F. A. CLARKSON AND BREFNEY O'REILLY.

Senile Respiratory Disorders.

Powell (*The Hospital*) notes that old age is a health process, not a disease. One of the most common events of this period is the calcification of the costal cartilages accompanied by senile emphysema. But these changes are physiological, not pathological, and are therefore not to be treated. A localized fibrosis is, of course, very common and even in advanced life there sometimes occurs a sudden activity with hemoptysis or other evidence of pulmonary tuberculosis. From an old cavity there may sometimes be a great deal of mucous expectoration and even bacilli in numbers, and yet in the aged, this does not necessarily furnish proof of active tuberculosis.

After an attack of pneumonia or influenza, there is sometimes left behind a basal fibrosis which may be mistaken for an acute process, particularly if accompanied by some bronchitis. The treatment of this condition is directed to the general health, and not to the pulmonary condition.

In the use of strychnine Powell sounds a warning that although undoubtedly of great use it may sometimes be overdone, and the consequent rise of arterial pressure tempts the old man to do more than he has strength for. Any course of this drug, then, should not be too prolonged and small doses only should be ordered, such as two or three minims of the liquor strychninae, or 5-7 of the tincture of nux vomica.

One of the most common "end-diseases" of old people is latent pneumonia, "the old man's friend." The symptoms of onset are fatigue and exhaustion, with a very little cough and expectoration. Cheyne-Stokes breathing, by no means rare in old people, is probably due to an exhaustion of the center which requires a longer rest than it can get in the ordinary way of respiration.

For all these conditions he recommends warm oxygen inhalations, which are more beneficial than alcohol. The gas is passed

through warm water or through a metal tube warmed by a hot water chamber.

The Function of the Optic Thalamus.

Mott, in his lectures on the physiology of the emotions, states that all afferent sensory stimuli meet in the optic thalamus, the principal function of which is that of a sensory relay station to the cortex. Irritative lesions of the thalamus are frequently associated with severe pain in the opposite half of the body. In old cases of cortical hemiplegia, the face on the diseased side can only be imperfectly moved by the will, yet if the patient under the influence of the emotions laughs or cries this side of the face is more strongly contracted than the non-paretic side. In lesions of the thalamus, on the other hand, the opposite is observed. The patient, on the one hand, can voluntarily move the paretic side of the face well in all directions; on the other hand, in emotional expressional movements, this side of the face is immovable.

Physiology and Treatment of the Stomach.

Strasburger reviews what has been learned in late years in regard to the physiology, pathology and treatment of the stomach. Grutzner's research has confirmed the fact that the food as it is taken into the stomach lies in layers and does not become mixed. The food first taken into the stomach lies around the periphery and that taken later lies inside of this and thus does not come in contact with the mucous membrane, even when the food is more or less fluid. These facts show that the Sahli and Mathieu tests of stomach functioning are liable to give misleading findings. They also throw new light on the therapeutic administration of hydrochloric acid. When the hydrochloric acid is given after a meal it lies in the middle of the top layer of the stomach content and thus does not come in contact with the pepsin secreted by the mucosa. The digestion is not improved by its administration unless pepsin is administered with it. Experience has shown, also, that larger amounts can be given to advantage. Leo prescribes for adults from one-half to two teaspoonfuls of a mixture of 5 or 10 parts each of hydrochloric acid and dried pepsin with water to 50 parts, taken in sweetened tea during or after the meal. If the aim is to prepare the stomach mucosa for secretion of gastric juice on ingestion of food, or to stimulate the production of bile and pancreatic juice, the hydrochloric acid should be given alone, just before the meal, without pepsin, and in smaller doses.—*J. A. M. A.*

National Volunteer Emergency Service.

We learn from Dr. F. Elbert Davis, Adjutant-General of the National Emergency Service, that that Service has been reorganized, and will be under the direction of Dr. James Evelyn Pilcher, Director-General. We hope that the reorganization of this Service, which means so much to the public and the profession, will bring forth very satisfactory results.

Toronto Academy of Medicine.

At the annual meeting of the Academy of Medicine, held May 5th, the following officers were elected:—President, Dr. J. F. W. Ross; Vice-President, Dr. A. A. Macdonald; Honorary Secretary, Dr. H. J. Hamilton; Honorary Treasurer, Dr. J. D. Gibb Wishart, and also a Council of 15 members.

At the same meeting the first Honorary members were elected as follows:—Dr. Wm. Osler, of Oxford; Dr. James H. Richardson and Dr. Walter B. Geikie, of Toronto. Dr. Joseph Bascom, of Toronto, was elected a life member.

The Fifth Pan-American Medical Congress will take place in Guatemala, C.A., August 5th-8th, 1908. A pleasant sea voyage, a happy reunion with our Southern confreres in Medicine, and a cordial reception are anticipated. Those interested in Nervous and Mental Diseases are invited to attend and to contribute to the work of the section on Psychiatry and Neurology. For further particulars address C. H. Hughes, M.D., Secretary, Section of Nervous and Mental Diseases, 3872 Washington Avenue, St. Louis, Mo.

The *Southern Medical Journal* made its first appearance in Nashville, Tenn., last month. Its aim will be to advance the interests of the entire Southern medical profession.

OBSTETRICS AND GYNECOLOGY.

IN CHARGE OF ADAM H. WRIGHT, K. C. M'ILWRAITH, FRED. FENTON AND HELEN MACMURCHY.

A Case of "Fleshy Mole." By J. W. Browne, B.A., M.B., B.Ch., Adelaide.

The patient, Mrs. M., was first seen by me on December 26th of last year. The history was as follows: She had been married about a year; was last unwell on October 9th; on Christmas Day she noticed that she was bleeding, and sent for me on the 26th. I found, on examination, that the uterus was enlarged, about the size one would expect at two and a half months, and that there was blood coming away from it. There was no pain. I diagnosed threatened abortion, and prescribed rest in bed, and gave a little opium. The patient stayed in bed altogether nine days, by which time the bleeding had stopped. Only blood was passed during this time. She then got up and went about her work as usual, and I congratulated myself on having prevented a threatened abortion. I may remark in passing that this is a thing I have always tried to do in any case of threatened abortion I have had occasion to treat, but have never yet succeeded in doing, with the possible exception of the present case.

I heard nothing more from the patient until May 6th, when she came to see me. Her complaint was then that she was not feeling altogether well; that she had "no life and felt no interest in anything"; also that she had not noticed that alteration in figure she was entitled to expect. The bleeding had not returned, and there had been no discharge of any kind. I examined again, and was a good deal surprised to find that the uterus had apparently not increased in size since the last examination; it was, so far as I could judge, exactly in the same condition. I told the patient that the child was dead; that it must have died at the time she had that threatened miscarriage, and that it had not come away as it should. I recommended operation, and explained to her that she would not be well until everything left behind had been removed. The family, however, had had a most unfortunate experience of operations in the past, and were strongly disinclined to submit to another, of the necessity of which they were not entirely convinced. They decided to await the healing influences of time and nature. I told the patient to come again in a month. She did, with the same story as before, and I again strongly recommended operation. This time she

consented, asking, however, for four weeks' grace, to give those healing influences another chance.

On July 21st bleeding recommenced, accompanied by severe pain. There had been a slight brownish discharge for two weeks before this date. On the 22nd I found a mass protruding from the os uteri, which I withdrew, and then curetted the uterus. The mass referred to was about the size and shape of a small orange. It contained a cavity, opening to the exterior. The wall of the mass was about an inch thick; the material of medium toughness, and fairly uniform texture. No fœtus recognizable. It was, I think, a well-marked specimen of the so-called fleshy mole.

The patient was quite well in a week, and has remained so since. The catamenia returned in four weeks after the expulsion of the mole.

The points of interest in the case seem to me to be the long time, nearly seven months, the mole was retained; the total absence of bleeding during that time; the aseptic condition of the mole; and the comparatively trivial symptoms its presence occasioned. The mole was expelled almost exactly at the time the fœtus would have attained to term had it survived.—*Australasian Medical Gazette.*

Monstrosity.

Dr. M. V. Mulcahy, of San Jose, Cal., reports a peculiar case, under date of May 3rd, 1908:

Parents both healthy, no abnormality; they have two children, both girls, one six, the other four, perfectly normal and quite pretty.

The mother gives no untoward history during pregnancy except she had scarlet fever in March last. I attended her; the attack was light, highest temperature 103 degrees, lasted only five days.

I was called at 1 p.m. April 25th, she saying that she was flowing some. I examined; found a breech presentation; os patulous slightly dilated, no pains; ordered her to bed; was called again at 4 p.m., she having hard pains; on examination found os dilating nicely; membranes ruptured. Labor was normal and easy; fœtus delivered at 5.30. The placenta, which was expressed without aid five minutes after, was small but normal, cord very small and flaccid. Fœtus breathed about once in a minute for half an hour. Monday a.m. mother's temperature 103.6 degrees; lochia scant and very light color, some odor.

Evening temperature, 102; pulse, 120; tympanitis. Tuesday a.m. temperature, 102; evening, 100.4. Wednesday temperature, 98.6, and has been normal since. No cause could be found for rise of temperature, as no part of placenta or membranes were left *in utero,* and thorough asepsis on my part would preclude from that source. I believe cause to have been infection from fluid in fœtal nose, or whatever it was.

The fœtus was as you see it. There was no nose or prominence between the mouth and eyes. The eyes were, as you see, both evidently in one orbit, and, staring at you, were a very uncanny object. The picture makes them appear white, but the conjunctiva was very much injected. The horn on the forehead had a small opening, central, like a meatus urinarius, and on probing a few drops of a muco-purulent nature were discharged from it. The right arm was like a seal's flipper, jointed back, and terminated in two fingers, middle and little fingers, but they were only about 1 1-2 inches from the elbow; left had thumb located near median line of palm and appearing between middle and ring fingers. Both feet were very marked cases of talipes varus. The ears were of tremendous size for a child, but presented no abnormality. The child was a male and weighed 8 1-2 lbs. It breathed for half an hour with a peculiar noise which was indescribable.

THERAPEUTICS.

Treatment of Angina Pectoris.

Sir Clifford Allbutt, F.R.C.P. (*Folia Therapeutica*, Jan., p. 3): Too often angina pectoris is regarded as inevitably fatal. On the contrary, of all perilous maladies it is, perhaps, the most curable. The writer thinks that it is usually a painful lesion of the first part of the aorta due to tension. Sometimes it may be produced by stretching of the pericardium, as in aneurysm of the left venticle, or by inflammation of that part of the tunic which invests the root of the aorta; very rarely it may depend on some extraordinary kind of disturbance in the mitral area. The innervation of all these parts is approximately the same, and the disease even in these rare points scarcely deviates therefore from the common formula. This tenderness may be due to aortitis of any kind, *e.g.*, rheumatic, influenzal, or atheromatous. In the first two the tensile stresses may be about or even below normal; in the third, normal or excessive. Primarily angina pectoris is not a fatal disease; secondarily, by reflex inhibition of a frail heart it frequently proves fatal. Even in the case of an infirm heart complete recovery often comes about. In young subjects recovery is the rule.

In treatment there are three purposes: to mitigate, if possible, the lesion of the aorta; to reduce the stresses; to block the inhibitory influence on the heart. In many cases to reduce the stresses may be our only means of compassing the restoration or quiescence of the vessel. To combat the local affection directly we may use antidotes, as in acute rheumatism for instance, salicylates, and perhaps the iodides. The iodides with or without mercury would be required in syphilis. In aortitis arising from other toxins, such as influenza, antidotal means may be lacking, and we have to trust in the recuperative methods of "Nature." There are, however, intermediate cases, such as gout, in which we may not have antidotes so direct as the salicylates, but tolerably efficacious empirical methods nevertheless, on which we may place no little reliance. Indirectly we may do much by reducing the tension. In many, perhaps in most cases, the tension depends on pressures exceeding the normal. In elderly persons angina pectoris is commonly attended with atheroma and often with increased arterial pressures; but in not a few cases it seemed

to be of infective origin, especially of influenzal origin. In these the arterial pressures were not persistently enhanced, and they ended favorably. It may be difficult to distinguish between means used simply to reduce pressure and similar means for the elimination of gout or goutiness; but the distinction is unimportant. Gentle and frequent mercurials, such especially as calomel, in persons who tolerate it easily, laxative waters, at a spa or otherwise, colchicum, salicylates, iodides, strict diet are some such means. Flatulent or catarrhal states of the stomach must be relieved. In obscure cases of heart disease the morbific element may be syphilis, so in angina pectoris likewise give the patient the benefit of this doubt. To promote normal metabolism exercise is important; but as exertion raises arterial pressures, at any rate at the beginning, we shall have to balance tentatively in the individual one indication against the other. Meals should be restricted in quantity. If appetite be defective, it may be solicited by a draught composed of hydrochloric acid, pepsine, and perhaps a little strychnine or other bitter stomachic of a more carminative kind, not so much to aid in the digestion of the meal as to arouse the languid viscus by its customary excitants. Carbohydrates are the kind of ingestum most concerned in the disengagement of flatus, and must be ordered sparingly and with discretion of form and cooking. Alcohol, strong tea or coffee, and other excitants of the heart must be forbidden.

Rest in bed is essential and is sadly neglected. From the first attack of angina the patient should be sent to bed as if he had an aneurysm, so as to reduce the work of the heart as much as possible. The pressure should be reduced as low as may be consistent with health by vaso-dilators, in co-operation with the measures described. On the other hand, the physician must be cautious in ordering an elderly patient to bed, or bed and couch, even for three months. To send an old man to bed for some weeks may be to consign him to a living grave; his lungs may become œdematous, his energies may flag, and he may never get about again. Or a perishing heart may be kept agoing only by a certain activity of oxidation, and in muscular idleness it may dwindle more and more. In young subjects with sound cardiac muscles and arteries this deterioration is less menacing. Nevertheless the writer constrained a man over 80, wiry, cheerful, with the decrescent form of atheroma, to keep bed and couch for many weeks, and cured an angina pectoris which had lasted a considerable time.

The value of the nitrites in reducing aortic pressure is well known; still we are always learning, even in well-worn subjects.

It may be said that an effect so transient as theirs cannot be of more than passing service. But Dr. Harvey, of Toronto, has proved that compression of the abdominal aorta of rabbits for half an hour daily for two or three weeks rends and destroys the arch of the vessel. We have learned that chloride of barium and digitalis have, by virtue of their pressor effects, an unmistakably evil influence in angina pectoris. To reduce tensions at intervals, even for short periods, seems to give the parts a chance to recover. Moreover, Prof. Osler assures us that we are too chary in the use of the nitritis; and that we drop them too soon. In case of necessity he is not afraid to push the 1 per cent. solution of nitro-glycerine as far as 30 minims thrice daily. Sir William Gowers thinks that the nitrites have more than this virtue of temporary reduction; that by prolonged use they have a "steadying effect on the vaso-motor centre." To this end he administers them for months together, sometimes with a little strychnine. The value of the iodides in arterial diseases, arterio-sclerosis, aneurysm, and angina pectoris, is universally admitted. Unless in the suspicion of syphilis, doses of 3 to 5 grains thrice daily are sufficient. This prescription is to be continued for six months, with, of course, such temporary suspension as any intolerance of the patient may indicate.

Eccentric physical causes, such as irritation in any sympathetic part of the body, as, for example, by a loaded colon, an eczema, and so forth, must be sought with vigilance and promptly removed.

In the palliation of the attacks the nitrites are the chief remedy. The writer urges the need of blocking the reflex by which the heart is inhibited, it may be, fatally. This is best done with atropine, which he orders continuously until the liability to an attack seems to have vanished. As tolerance is established, the dose must be increased accordingly. On the access of an attack he orders a dose to be promptly injected under the skin. Morphia, in the vogue of the nitrites, is not to be forgotten; it likewise probably blocks the dangerous reflex path, besides its great efficacy as a palliative. In a series of attacks, and in their imminence, it is invaluable. It is of little use to inject less than one-quarter grain at once, or, in case of any particular hesitation, one-sixth grain, followed in ten minutes by another sixth.

Reduction of Liquids in the Treatment of Heart Disease.

H. Huchard and Ch. Fiessinger (*Bulletins de l' Academie de Medicine,* Feb. 11, p. 168):

Reduction of the liquids taken has been recommended in the treatment of obesity and the circulatory troubles dependent on it, but after having had considerable vogue the method fell into disuse. Like blood-letting and other methods, it was used too systematically and not according to indications. The writers have found reduction of liquids useful in the treatment of disease of the heart, particularly in that due to arterio-sclerosis. In certain conditions this reduction is urgently necessary in order to save the patient from imminent death. The writers particularly refer to the dilatation of the heart of valvular disease, principally in mitral regurgitation complicated by aortic regurgitation, such as occurs in great drinkers of beer (*Bierherz*). No doubt in the heart disease due to arterio-sclerosis it is necessary to prescribe milk and liquids in abundance to promote dieuresis and elimination of toxins. But when cardiac dilatation increases and becomes permanent, when the damming of the blood in the veins is irreducible, diuretic drinks cause little elimination. They surcharge the blood, raising venous tension and immobilising more and more the heart in a state of extreme dilatation. Thus the dyspnœa, œdema, and other symptoms of cardiac failure, against which digitalis and other remedies are powerless, are increased. Hence a latent affection of the heart is sometimes revealed after immoderate imbibition, such as occurs in beer drinkers. The older the patient the greater the danger, for the myocardium loses its tone, the much-altered "peripheral heart" can no longer come to the assistance of the "central heart," and the kidneys are more inadequate. It is then necessary to follow the principle, relieve the heart in order to facilitate its work. Not only the quantity of urine eliminated in the 24 hours, but also the quantity of fluid ingested should be observed. The weight of the patient should also be noted. If that rapidly increases interstitial or visceral œdema, which often precedes peripheral œdema, is indicated. One day the dropsy increases rapidly; the heart becomes still more dilated, the abundance of liquid taken causes diminution in the excretion of urine, and renal and cardiac remedies fail totally. The dyspnœa becomes intense, the insomnia becomes continuous, the œdema invades all the tissues, and life is endangered. Then reduction of the liquid taken is urgently necessary, and, strange to say, is a powerful means of dieuresis. After administration of

one or two purgatives the reduction allows elimination of the liquid in the tissues and restores the contractility of the heart. Similarly, in acute hydronephrosis one of the best means of diminishing the tension in the sac and of re-establishing the secretion of urine is almost completely to cut off liquids.

In the cases of acute cardiac dilatation described the writers prescribe for the first day 1,500 gm. of liquid (500 gm. of milk mixed with 1,000 gm. of water), of which a Bordeaux glass full is to be taken every hour. On the second and third day half the quantity is taken; from the fourth day the quantity of solid food taken is also reduced. At the same time small doses of digitalin—one-tenth mgm.—are given for ten successive days, then interrupted for five days, and again repeated for ten days. Thus the danger of a cumulative effect is avoided. Simultaneously 100 cgm. of theobromine, which is a dechlorodising agent, are also given. On the first day the diuresis is not always great; the quantity of fluid excreted may be 1,600 or 1,700 gm. On the following days the quantity increases to 2,000, 2,500, and 3,000 gm.; from the fifth day it falls to 1,700 or 1,600 gm., and continues at this level for from 5 to 10 days according to the extent of the œdema. In a few days the dyspnœa and insomnia disappear. In some cases it may be necessary to evacuate pleural or peritoneal effusions or to relieve hard œdema of the legs by scarification. If diuresis does not appear the prognosis is grave. An attempt may then be made to stimulate the heart by injecting one-quarter gm. of caffeine once or twice daily.

Editorials.

HONOR TO ROBERT KOCH.

Dr. Robert Koch, the great German bacteriologist, was entertained at a magnificent banquet in New York, April 11th, 1908. We learn from the *New York Medical Journal* that there were present 450 admirers of the German savant. Mr. Andrew Carnegie sat on the right of the guest of honor.

Dr. Koch was born in 1843, and after graduating, practised medicine in Woolstein from 1872-80. In this little town, removed from all the centres of medical science, he became interested in bacteriological studies, and discovered the anthrax bacillus in 1876. Thus, without a university career, he became soon a prominent figure in the medical profession. In 1880, he was called to Berlin as a member of the Imperial Department of Health. Since that time his work in connection with tuberculosis, cholera, trachoma, rinderpest, plague, malaria, typhoid fever, and sleeping sickness is fairly well known, and highly appreciated.

In his speech given at the dinner we find the following words: "Were I to review everything that has been said to-day in my praise, and also to take into consideration the great distinction conferred by you upon me. I must necessarily ask myself, am I entitled to such homage? I believe that I can accept with a clear conscience many of the laudatory things said about me, but I have done nothing more than you are doing every day. I have worked as hard as I could, and have fulfilled my duty and obligation. If the success was greater than is usually the case, the reason is to be found in the circumstance that I came in my wanderings through the medical field upon roads where the gold was still lying by the wayside. Fortune is necessary to be able to distinguish gold from the base metals, but that is no great merit."

The Chairman, in introducing Dr. Koch, said: "What your achievements in science have been, men who are capable of judging will tell us to-night. It will not be an easy undertaking,

for what you have accomplished will hardly find its equal in medical history. With admiration and deep wonder, we ask ourselves, how can one human brain succeed in creating so much?''

Dr. Welch, of Baltimore, said: ''Professor Koch's work is a continuation of discovery for science, and comfort for mankind. He has always shown the stamp of a scientist in his work. He has never allowed his view to wander from what would be most practical for the benefit of men. His work has been a triumph for the experimental method in science.''

Dr. Abraham Jacobi said: ''The nineteenth century gave to medicine four epoch-making men, viz., Bichat, Virchow, Pasteur and Koch. We have the honor of having with us the only survivor of these great men.''

Mr. Carnegie said: ''In viewing the progress of the world in its various phases, no profession has made, and is making, greater progress to-day than the art of healing. In the list of the heroes of civilization, Prof. Koch occupies a high position. The world has ever been devoted to hero-worship, ever trained to worship physical force, as displayed in its heroes. These heroes, from the days of Homer, have been men who became celebrated for the number of their fellow-men they had killed. Our true hero of to-day is the man who can count the number of men, women and children he has saved. Jenner, Lister, Pasteur, Reid, Carroll, Lazear, Agramonte and Koch are such heroes.''

THE VITAL STATISTICS ACT.

The amended Act, will, it is hoped, facilitate the collection of vital statistics, and be useful to the public in permitting of the registration of, more particularly, deaths; and also enable them to secure more readily than has heretofore been possible, certificates of either births, deaths, or marriages of recent date.

The provisions of the Act have been extended to the Indian districts, they being deemed territories, and the Division-Registrar of the same appointed by Order-in-Council, being paid

for his services in a formal manner, as has heretofore been the custom in the unorganized portions of the province.

Much confusion has existed in the past in reference to definition of a search. This, according to Section (7), sub-section (4)a, refers to one county or district, covering a period of not more than three years; the fee for searching being 25 cents—while for a search for one registration extending beyond one county, or for more than three years, the maximum fee is placed at $2.00. The fee for a certificate, as issued by the Registrar-General (which is *prima facie* evidence in any court), is 50c, the same as heretofore.

Duties of Division-Registrars.—The officers will now be provided with schedules in duplicate of births, marriages, and deaths, and returns have to be made to the Registrar-General on or before the fifteenth days of January, April, July, and October, and not half-yearly, as heretofore, together with original returns as received from clergymen, physicians, and householders. According to sub-section (6) of Section 11, if a Division-Registrar has reason to believe that any birth, marriage, or death has not been registered, it is now his duty to inform the proper person, and on failure of such person to make the registration, information has to be sent forthwith to the Inspector of Vital Statistics.

For the convenience of the public, the Division-Registrar, upon application and upon payment of a fee of 25 cents, shall give a certificate in the prescribed form, which has not been included in any quarterly return made to the Registrar-General; and the statute distinctly states that the fee is for the personal use of the Division-Registrar issuing the same.

Section 14 provides that every legal medical practitioner who attends at the birth of a child shall forthwith give notice on the prescribed form to the Division-Registrar. And Section 22 provides that the duly qualified medical practitioner last in attendance during the last illness of a person who dies shall, before interment, supply to the Division-Registrar all the particulars required to be registered of such death; and in order that there may be no uncertainty as to these requirements on the part of medical practitioners, when other parties notify of

either a birth or death, sub-section (3) of Section 31 provides that in no case is the doctor relieved of these responsibilities; and it is the intention of the Department to enforce these two important measures.

Re the notification of a birth or death, Section 15 provides as follows:

(*a*) The father if living; or

(*b*) In case of his inability, or if he is dead by the mother, if living.

(*c*) In case of the inability of both parents, or, if neither be living, by the person standing in the place of the parents of the child.

(*d*) If neither of these can notify, then by the occupier of the house in which the child was born, if he has knowledge of the birth, and by the nurse or midwife present at the birth.

These notices to be given within thirty days after date of birth. And in the case of a new-born child found exposed, it is the duty of any person finding such child to register such information as is required with the Division-Registrar.

As to the notification of a death, the order is as follows: "Section 22.—The occupier of a house in which a person dies, or if the occupier be the person who has died, then every adult person residing in the house in which the death took place. Where a death does not take place in a house, then every person present at the death or having any knowledge of the circumstances, or the coroner who views the body."

Section 20 provides for the altering or inserting a name after the registration of a birth has been made, up to a period of ten years after the occurrence of the same.

In order to facilitate interment of the dead, sub-section (2) of Section 22 provides that where the death has occurred in a township or territory without municipal organization, the return may be made to the nearest Division-Registrar, who, upon the payment of a fee of 25 cents, *shall register the same and issue a certificate of registration of death.*" The fee in this case being for the personal use of the Division-Registrar. And where the

duly authorized Division-Registrars are remote from any particular section of the Province, the Registrar-General, upon proper presentation of the facts, may appoint sub-registrars for the purpose of issuing certificates of registration of death. The fee being paid by the applicant, and the sub-registrar must make his return direct to the Division-Registrar of the district in which the death occurred, and to the Registrar-General.

A very important amendment is that contained in Section 25. The first part reads as follows: "The removal for burial or the embalming of any body shall not take place, and an undertaker, clergyman, sexton, householder or other person shall not engage in the burial of a body unless a certificate of registration has been previously obtained from the Division-Registrar. The importance of this in criminal cases is quite evident to the medical profession.

Under Section 27, caretakers, owners of cemeteries or burying grounds, are required to transmit to the Division-Registrar of the division in which the cemetery is situated, quarterly returns, and subsequently transmitted by that officer to the Registrar-General.

Toronto, May 12th, 1908.

TORONTO GENERAL HOSPITAL.

It is generally conceded that the site acquired for the proposed New General Hospital is a good one. The block secured is bounded by Elizabeth, College and University Streets on the East, North and West, respectively, and by Hayter and Christopher Streets on the South. The Sick Children's Hospital and the new Nurses' Home for the same institution are east of this block.

It was proposed first (we think, by Mr. John Ross Robertson) that it would be well to close Christopher and Hayter Streets, and purchase the land as far south as Gerrard Street. This would necessitate the continuation of Gerrard Street from Elizabeth Street to University Avenue. The block would then be bounded by College, Elizabeth, Gerrard and University Streets.

It has also been proposed that the new Psychiatric Hospital, the Ontario Government intends to build, should be placed on the southern part of this block.

If the Government and Hospital Trustees carry out their present intentions, it seems probable that, on this magnificent block of 15 or 16 acres, we shall have, in the not distant future, the following buildings, commencing from north to south: Pathological Laboratory, Outdoor Department, General Hospital, Nurses' Home, and Psychiatric Hospital.

THE COUNTRY DOCTOR.

This is a well worn theme, but it puts on fresh attractiveness under the touch of Dr. N. A. Powell, of Toronto, professor of medical jurisprudence and associate professor of clinical surgery in the Medical Department of the University of Toronto. His address on the subject was published in the March number of the *Canadian Journal of Medicine and Surgery*. It was first delivered in 1890 before the students of Trinity Medical College, and it is so good that we do not wonder that it was repeated by request seventeen years later, in 1907, before the Medical Society of the University of Toronto.

Dr. Powell tells us that for ten years he was himself a country doctor, but that it is not his own story that he recounts. He evidently had other country doctors under observation, and the composite photograph which he carries in his mind, and of which his address is an impression, is a well deserved tribute to the country doctor in general. There may be an occasional black sheep in the ranks, but the average country doctor is such as Dr. Powell depicts him. "The glory of optimism pervades his life" "He is the best friend a community can have. He is the confidant of lovers, and helps to make up their quarrels. He brings together again the husband and wife, whom differences have separated. He is father confessor to half the country, and keeps his trust with knightly honor. His sympathy is deep and genuine, and is not worn upon his coat sleeve. No one more

than himself feels contempt for a 'gusher' in or out of his profession."

The address overflows with humor. The author quotes Father Faber as having once said: "There is no greater help to a religious life than a keen sense of the ludicrous." He tells us that "an evangelist at one time got into the habit of calling his audiences 'Dear souls.' Laboring in Ireland, he used to say with effect, 'Dear Belfast souls,' 'Dear Dublin souls,' but when he said 'Dear Cork souls' it did not seem quite so appropriate."

A grand man is the country doctor as portrayed by Dr. Powell, but he is not perfect. "To be perfect," he says, "an ideal doctor, he would need to have the wisdom of Solomon, the patience of Job, the strength of Samson, the bravery of Joshua, the eloquence of Paul, the meekness of Moses, the faithfulness of Abraham, the charity of Dorcas, and the executive ability of Jezebel. He would have to hunt like Nimrod, fish like Peter, climb like Zaccheus, and drive like Jehu. He would have to keep clear of the gout of Asa, the melancholia of Saul, the gastric infelicity of Timothy, and would still fall short of perfection if he had not the tireless perseverance of the devil himself." We have quoted Dr. Powell's own words freely, feeling that any attempt to paraphrase them would detract from their expressiveness. We hope that many of our readers will be fortunate enough to obtain the entire text of the address.—*N. Y. Med. Jour.*

THE ESPERANTO LANGUAGE.

It may be that Esperanto will be used to some extent at the next International Medical Congress, to be held in Budapest, August 29th to September 4th, 1909. If so, it might be well for those physicians of Canada who expect to attend the Congress to learn something of the new language.

We are told by the *Toronto World* that the study of Esperanto is spreading very rapidly in different parts of the world. It has

already taken quite a grip in many parts of Canada. An Esperanto Club was formed in Montreal in 1901, and it is probably not generally known that there is a club in Toronto, and that there are many earnest students of the language in different parts of Canada.

The Jewish Chronicle, of London, England, publishes a very interesting article. The writer says: "Dr. Zamenhof has created a language which, though it may never become universal, is already spoken by hundreds of thousands of enthusiastic disciples in every part of the world."

Dr. Zamenhof was born in Bielostok, on the third day of Chaunkah, 1859, his father and grandfathers before him having been teachers of languages. He was educated at Warsaw, and went to Moscow, and finally commenced practice as an oculist. In his pursuit of a livelihood he for some time underwent terrible hardships on account of prejudices against him as a Jew, and as an idealist. The town in which he practised was a "Babel of languages," and its daily life was poisoned by the bickerings and animosity that arose out of this diversity of tongues. From early boyhood he paid much attention to the following languages: Latin, Greek, French, English and Hebrew, and whilst studying these languages he ever had in view the discovery of some universal medium of communication that would bring forth a better state of things, and, although he met with many discouragements at first, his progress has been uninterrupted and almost phenomenal during the last few years.

The year after his first pamphlet was published the Volapuk Society, at Nuremburg, ceased to exist; but the majority of its members went to form the first Esperanto Club in 1888. Since then societies for its study have been formed in all parts of the world, and there are now many hundreds of them. In Russia there are more people able to speak Esperanto than English. In England there are now sixty groups at work. It is taught in many English and Scotch schools. There is a large Esperanto literature growing up. The grammar has been translated into more than twenty languages and dialects, and there are at least twenty monthly journals devoted to its propaganda.

The Linacre Lectureship at Cambridge.

The Linacre Lectureship is one of the oldest in England, and has been held by many distinguished men. Among them were: Wm. Barrondale, Thos. Gisborne, Sir Thos. Watson, Sir Isaac Pennington, John Haviland, Sir George Paget, Wm. Heberden and Donald MacAllaster. Up to the present time it has generally been held by a single incumbent for a term of years. It is now converted into an annual office, and every year some person of eminence will be asked to deliver one public lecture in the Easter term. The first lecture under the new scheme was delivered May 6th by Dr. Wm. Osler, the Regius Professor of Medicine in Oxford, who took for his subject "Thomas Linacre: His Life and Work."

Heroism among Medical Military Officers.

We sometimes feel sensitive because laymen do not always say pleasant things about physicians. We have to acknowledge, however, that the world at large appreciates the fact that our profession furnishes many military heroes. We are told by the *British Medical Journal* that Col. G. J. Younghusband, C.B., in his "Story of the Guides," says that in many a hard fight the brave and devoted officers who have been surgeons to the corps have displayed the greatest gallantry, but he singles out one of these as specially worth recording. In the expedition of 1853 against the Jowaka Afridis, thirty men of the Guides, under Lieut. Turner, had driven a separate force of the enemy into a stone breastwork at the top of a peak; but night came on and the order to retire was given. Retirement meant practically annihilation for the little force, so, sticking to the rocks, Turner had the bugle sound "Send reinforcements." Hodson, afterwards famous, who was near, but himself faced by great odds, sent all the men he could spare, but these were not strong enough to effect their purpose. Then it was that Dr. R. Lyell, Surgeon of the Guides, took on himself to carry forward the much-needed succour. In reserve, lying near him, was the Gurkha company of the Guides, and also a company of the 66th Gurkhas, under a native officer. Taking these troops, with great dash and personal gallantry he led them to the attack, drove back the already exulting enemy, stormed their position, and extricated Turner and his party from their perilous position. It was a noble deed, nobly and gallantly carried out, and when it had been achieved the brave soldier returned to the tender care of the wounded and to alleviate the pains of the dying.

CANADIAN MEDICAL ASSOCIATION

As announced in our last issue, the Forty-first Annual Meeting of the Canadian Medical Association will be held in Ottawa, June 9-10-11, under the Presidency of Dr. F. Montizambert. It is the first time that the members of the Association have had the opportunity of visiting the capital of our Dominion when Parliament is in session. It will be the first meeting under the new constitution adopted at the meeting in Montreal last year.

The Local Committee of Arrangements makes the following announcements: On the first evening, at 5 o'clock, there will be a reception by local members at the Ottawa Golf Club. On the evening of the first day there will be a civic reception at the Carnegie Library. During the second day there will be an excursion to Caledonia Springs. On the evening of that day there will be a smoking concert. On the third day there will be a visit to the laboratory at the Experimental Farm.

Canadian Medical Protective Association.

The Annual Meeting of the Canadian Medical Protective Association will be held June 9th at 12 o'clock noon.

Additional information of a local character may be obtained from the Local Secretary, Dr. Wm. Hackney, 376 Somerset Street, Ottawa, and any general information from the General Secretary, Dr. George Elliott, 203 Beverley Street, Toronto.

Provisional Programme.

Presidential Address—Dr. F. Montizambert, Ottawa.

Address in Medicine—Dr. Risien Russell, London, England.

Address in Surgery—The Surgical Rights of the Public—Dr. John C. Munro, Boston, Mass.

Treatment of Meningitis with Flexner's Serum—Dr. F. G. Finley and Dr. P. G. White, Montreal.

The Diagnostic Value of Perversion of Gastric Secretion—Dr. Graham Chambers, Toronto.

The X-Ray as a Therapeutic Agent, Its Indications and Untoward Effects, Having Special Reference to Its Action Upon the Generative and Internal Secretory Organs of the Body—Drs. Omar Wilson and J. Harold Alford, Ottawa.

Medical Section.

Dr. John T. Fotheringham, Toronto, Chairman; Dr. Alex. J. MacKenzie, Toronto, Secretary.

Our Experience in Broncho-Pneumonia—Dr. C. S. McVicar, Hospital for Sick Children, Toronto.

The Differential Diagnosis of Some Forms of Mental Disease and a Note as to Treatment—Dr. G. J. Fitzgerald, Toronto.

Out-Patients' Clinics for the Tuberculous Poor—Dr. Harold C. Parsons, Toronto.

On the Choice of a Climate—Dr. Geo. D. Porter, Toronto.

Hæmoptosis in Pulmonary Consumption—Dr. J. H. Elliott, Toronto.

Spina Bifida Associated with Syringo Myelia—Dr. Colin D. Russel, Montreal.

Meningitis—Dr. A. E. Ranney, North Bay.

Some Interesting Complications of Pulmonary Tuberculosis and their Treatment—Dr. J. K. M. Gordon, Gravenhurst.

Ergot—Drs. E. V. Henderson and W. H. Cronyn, Toronto.

Some Unusual Cases of Rheumatism—Dr. A. McPhedran, Toronto.

What Shall We Say to Our Neurasthenic Patients?—Dr. G. S. Young, Prescott.

Pernicious Anaemia, Report of Cases in Country Practice—Dr. James Baird, Hemmingford, Quebec.

Some Further Observations on Pneumo-Thorax—Dr. W. F. Hamilton, Montreal.

Myo-Cardial Change in Valvular Disease—Dr. H. B. Anderson, Toronto.

Surgical Section.

Dr. Geo. E. Armstrong, Montreal, Chairman; Dr. Edward W. Archibald, Montreal, Secretary.

Title to be announced—Dr. James Bell, Montreal.

Congenital Pyloric Obstruction—Dr. F. J. Shepherd, Montreal.

Temporary Colostomy as a Curative Agent in Post-Operative Fæcal Fistula of the Colon—Dr. J. M. Elder, Montreal.

The Administration of the General Anesthetic from the Standpoint of the Operator—Dr. H. A. Beatty, Toronto.

Reports of Two Large Abdominal Tumors with Remarks—Dr. A. B. Atherton, Fredericton, N.B.

Diagnosis and Treatment of Ureteral Calculus, accompanied by Case Reports—Dr. A. E. Garrow, Montreal.

Exhibition of Cases to Show Result of Operations Reported at the London Meeting, 1903.

Advanced Hip-Joint without Shortening—Dr. R. P. Robinson, Ottawa.

Calculus of Ureter Removed per Vaginam—Dr. Walter McKeown, Toronto.

The Induction of Premature Labor—Dr. A. H. Wright, Toronto.

Combined Medical and Surgical Section.

Discussion on General Peritonitis.

Carcinoma of the Buccal Cavity, Etiology and Treatment—Dr. A. R. Robinson, New York.

Subdural Hæmorrhage and Its Surgical Treatment—Dr. E. W. Archibald, Montreal.

On the Use of the Ortho-Diagraph in Medicine—Dr. Robert Wilson, Montreal.

Public Health Section.

Dr. Chas. A. Hodgetts, Toronto, Chairman; Dr. Robert Law, Ottawa, Secretary.

Address by the Chairman, Dr. Hodgetts.

Title to be announced—Prof. Starkey, Montreal.

Title to be announced—Dr. J. D. Lafferty, Calgary.

Title to be announced—Dr. Seymour, Edmonton.

The Medical Inspection of Schools—Dr. John Hunter, Toronto.

Laboratory Workers.

Dr. W. T. Connell, Kingston, Chairman; Dr. A. R. B. Williamson, Kingston, Secretary.

Anesthesia in Laboratory Work—Dr. V. E. Henderson, Toronto.

Chorion Epithelioma in the Testis—Dr. C. B. Keenan, Montreal.

A Criticism of the Ammonium Nitro—Molybdate Method of Detecting Organic Phosphorus in the Tissues—Geo. G. Nasmyth, M.A., Ph.D., and E. Fidler, B.A., M.B., Toronto.

The Bio-Chemical Characteristics of Bacillus Influenzæ—Dr. Handford McKee, Montreal.

Title to be announced—Prof. J. George Adami, Montreal.

Title to be announced—Prof. J. J. MacKenzie, Toronto.

Title to be announced—Dr. C. W. Duval, Montreal.

Contribution to the Pathology of Tumors of the Lung—Three cases of Sarcoma: (1) Primary, (2) Secondary—Dr. E. St. Jacques, Montreal.

On the Technique of the Study of Complement Deviation—Dr. A. H. U. Caulfield, Toronto.

Combined Public Health and Laboratory Workers.

Water Supplies and Water Analysis—Dr. J. A. Amyot, Toronto; Dr. T. A. Starkey, Montreal; Dr. Gordon Bell, Winnipeg; Dr. W. T. Connell, Kingston, and others will contribute to this discussion.

Section on Eye, Ear, Nose and Throat.

Dr. H. S. Birkett, Montreal, Chairman; Dr. Handford McKee, Montreal, Secretary.

New Therapeutic Notes—Dr. Wilfrid Beaupre, Quebec.

Title to be announced—Dr. G. H. Mathewson, Montreal.

Title to be announced—Dr. Roy, Quebec.

Some Points in the Technique of Sub-Mucous Resection of the Nasal Septum—Dr. C. M. Stewart, Ottawa.

Ulceration of the Cornea, Etiology and Treatment—Dr. Handford McKee, Montreal.—(1) Calcified Fibroma of the Orbit; (2) A Case of Bilateral Lardaceous Infiltration of the Buccal Mucous Membrane, not hitherto classified—Dr. J. N. Roy, Montreal.

Section on Mental and Nervous Diseases.

Dr. W. H. Hattie, Halifax, Chairman; Dr. J. C. Mitchell, Brockville, Secretary.

Some Clinical Consideration of Dementia Præcox—Dr. Elbert M. Somers, Ogdensburg, N.Y.

Hydrotherapeutics when applied to Mental and Nervous Diseases—Dr. A. T. Hobbs, Guelph.

The Differential Diagnosis of some forms of Mental Diseases, with a note as to Treatment—Dr. Gerald Fitzgerald, Toronto.

Title to be announced—Dr. E. W. Archibald, Montreal.

Title to be announced—Dr. Colin Russel, Montreal.

Some Points in the Etiology of Progressive Muscular Atrophy, with Especial Reference to Heredity—Dr. D. A. Campbell, Halifax.

A Study of Thomsen's Disease (Myotomia Congenita)—By a sufferer from it.

Insanity and the General Practitioner—Dr. Moher, Brockville.

Hysterical Manifestations Occurring after the removal of a Brain Tumor—Dr. D. A. Shirres, Montreal.

Section on Gynecology and Obstetrics.

Dr. F. A. L. Lockhart, Montreal, Chairman; Dr. D. Patrick, Montreal, Secretary.

Title to be announced—Dr. Wm. Gardner, Montreal.

Some Cases of Cæsarian Section—Dr. R. E. Webster, Ottawa.

Pregnancy and Heart Troubles, with Report of Cases—Dr. J. C. Cameron, Montreal.

Title to be announced—Prof. de L. Harwood, Montreal.

Cases of Vicarious Menstruation—Dr. Blakeman.

Uterine Inversion, with the Report of a Case—Dr. D. Patrick, Montreal.

The Role of the Gonococcus as a Factor in Infection, following Abortion or Full-Term Delivery—Dr. Fraser G. Gurd, Montreal.

Report of Second Case of Chorio-Epithelioma—Dr. F. A. L. Lockhart, Montreal.

Thoroughness in Abdominal Surgery—Dr. A. Lapthorn Smith, Montreal.

Pubiotomy—Edward D. Farrell, Halifax, N.S.

Title to be announced—Dr. D. J. Evans, Montreal.

MILITARY SURGERY.

Dr. G. Sterling Ryerson, Toronto, Chairman; Dr. T. H. Leggatt, Ottawa, Secretary.

Addresses by the President of the Association of Medical Officers of the Militia of Canada, Colonel Ryerson, M.R.D., Toronto.

On the Advisability of Forming a Canadian Ambulance and Red Cross Association—Lieutenant-Colonel Jones, D.G.M.S., Ottawa.

Title to be announced—Lieutenant-Colonel Cameron, A.M.C., to V. Field Ambulance.

The Territorial Army Medical Corps, and the Canadian Medical Services—A Comparison—Lieutenant-Colonel Sponagle. A.M.C.

Title to be announced—Captain H. A. Kingsmill, 7th Fusiliers.

Some of the Difficulties Met with in Camp Sanitation—Captain G. M. Campbell, 7th C.A.

Title to be announced—Lieutenant-Colonel Maclaren, P.M.C., M.D., No. 8.

The Present Aspect of Military Sanitary Work—Major L. Drum, P.A.M.C.

Ready and Simple Tests for Water, Milk and the Detection of Disease in Animals—Captain L. M. Murray, A.M.C., No. 1 Field Ambulance.

As announced in our February issue, Edinburgh lost two of her greatest surgeons within a fortnight, during the Christmas holiday times—Mr. Thomas Anandale and Sir Patrick Heron Watson. These men were not only highly respected on account of their great ability, but were very much beloved by all classes, and were commonly known as "Tommy" Anandale and "Pat" Watson.

Personals.

Dr. E. L. Procter, of Port Perry, has removed to Whitby.

Dr. J. D. Berry has purchased the practice of Dr. E. L. Procter, of Port Perry.

Dr. W. H. B. Aikins sailed from New York on the *President Lincoln,* reaching Hamburg May 7th, and from there went to Dresden.

Obituary.

REGINALD HARRISON, F.R.C.S., ENG.

Mr. Reginald Harrison, of London, England, died Feb. 20th of pneumonia, following influenza, aged 70. Mr. Harrison is better known to the profession in Canada through his work done in Liverpool. While working in the Royal Infirmary in that city he published a work on Surgical Disorders of the Urinary Organs, which became very popular in Canada. He removed from Liverpool to London in 1889.

ROBERT B. STRUTHERS, M.D.,C.M.

Dr. Struthers died at his home on May 15th. He was a member College of Physicians and Surgeons, Quebec, in 1883. He was engaged in active practice in Sudbury for twenty years. Heart failure is said to be the cause of death. Those who knew Dr. Struthers intimately can appreciate what a great loss his death means to his patients. He was a large man, with broad ideas, high ideals, and anxious to do for others at all times. His profession was a source of pleasure to him, and he enjoyed hard work. He was much beloved by his patients, to whom he was most devoted. The writer and he worked together in '84 and '85 on the north shore of Lake Superior during the construction of the Canadian Pacific Railway, and formed a deep and lasting friendship. That his death was exceedingly sudden and unexpected is evidenced by the receipt of a letter written (the day before he died) in a most cheerful tenor in a light vein and full of quips and jokes. He leaves a widow, two daughters, and a son, who have the heartfelt sympathy of a large circle of friends.

Book Reviews.

SAUNDERS' FORTHCOMING BOOKS.

Messrs. W. B. Saunders Company, medical publishers of Philadelphia and London, announce for publication before June 30th a list of books of unusual interest to the profession. We especially call the attention of our readers to the following:

Bandler's Medical Gynecology—Treating exclusively of the medical side of this subject.

Bonney's Tuberculosis.

Volume II, Kelly and Noble's Gynecology and Abdominal Surgery.

Volume IV, Keen's Surgery.

Gant's Constipation and Intestinal Obstruction.

Schamberg's Diseases of the Skin and the Eruptive Fevers.

John C. DaCosta, Jr.'s Physical Diagnosis.

Todd's Clinical Diagnosis.

Camac's Epoch-Making Contributions in Medicine and Surgery.

All these works will be profusely illustrated with original pictures.

SAUNDERS' POCKET MEDICAL FORMULARY. By William M. Powell, M.D., author of "Essentials of Diseases of Children"; Member of Philadelphia Pathologic Society. Containing 1831 formulas from the best known authorities. With an appendix containing Posologic Tables, Formulas, and Doses for Hypodermic Medication, Poisons and their Antidotes, Diameters of the Female Pelvis and Fetal Head, Obstetric Table, Diet-lists, Materials and Drugs used in Antiseptic Surgery, Treatment of Asphyxia from Drowning, Surgical Remembrancer, Tables of Incompatibles, Eruptive Fevers, etc., etc. Eighth Edition, Adapted to the New (1905) Pharmacopeia. Philadelphia and London: W. B. Saunders Company, 1906. In flexible morocco, with side index, wallet and flap. $1.75 net.

A very useful work, and we commend it to our readers.

A MANUAL OF PATHOLOGY. By Guthrie McConnell, M.D., Pathologist to the St. Louis Skin and Cancer Hospital and to St. Luke's Hospital, St. Louis, Missouri. 12mo. of 523 pages,

illustrated. Philadelphia and London: W. B. Saunders Company, 1906. Flexible leather, $2.50 net.

Dr. McConnell discusses the subject with a clearness and precision of style that render the book of great assistance to both student and busy practitioner. The illustrations selected are both useful and artistic. The author's extensive laboratory experience has given to the work a practical character.

Atlas and Text-Book of Human Anatomy. Vol. II. By Prof. J. Sobotta, of Wurzburg. Edited, with additions, by J. Playfair McMurrich, A.M., Ph.D. Quarto volume of 194 pages, containing 214 illustrations, mostly all in colors. Philadelphia and London: W. B. Saunders Company, 1906. Cloth, $6.00 net.

This volume, the direct continuation of Vol. I., treats of the Viscera and the Heart. The selection and reproduction of dissections are identical with the methods employed in the first volume. Topographic anatomy has been especially considered. Practically all the illustrations are original, and especially prepared by most artistic methods, and reproduced in the most satisfactory and careful manner. The text descriptions are particularly clear and lucid and the terminology is made especially distinct by the use of italics and face type. This work should be of very great value to all interested in the subject of anatomy, and particularly, of course, to the medical student.

Surgical Diagnosis. By Daniel N. Eisendrath, M.D., Adjunct Professor of Surgery in the Medical Department of the University of Illinois (College of Physicians and Surgeons). Octavo of 775 pages, with 482 original illustrations, 15 in colors. Philadelphia and London: W. B. Saunders Company, 1907. Cloth, $6.50 net. Half Morocco, $8.00 net.

Of first importance in every surgical condition is a correct diagnosis, for upon this depends the treatment to be pursued; and the two—diagnosis and treatment—constitute the most practical part of practical surgery. Dr. Eisendrath, in this superb new work, takes up each disease and injury amenable to surgical treatment, and sets forth the means of correct diagnosis in a systematic and comprehensive way. The subject has been presented from a clinical standpoint, and the injuries and diseases grouped in the manner in which the surgeon or general practitioner considers them in examining the patient for the purpose

of making a diagnosis. The importance of differentiating simulating affections has been constantly borne in mind, and every assistance given along these lines. Special effort, too, has been exerted to furnish the means of making a correct diagnosis in the early stages of the condition. Definite directions as to methods of examination are presented clearly and concisely, providing for all contingencies that might arise in any given case. The chapters on cystoscopy and urethral catheterization are unusually instructive. Dr. Eisendrath, being a strong advocate of the teaching of surgery by the education of the eyes, has had specially made a large number of superb illustrations. These four hundred and eighty-two pictures are not only artistic but practical, for each one gives practical assistance in diagnosing the condition under consideration. The work is beautifully gotten up.

A Manual of Personal Hygiene: Proper Living Upon a Physiologic Basis. By Eminent Specialists. Edited by Walter L. Pyle, M.D., Assistant Surgeon to the Wills Eye Hospital, Philadelphia. Third Revised Edition. 12mo of 451 pages, illustrated. Philadelphia and London: W. B. Saunders Company, 1907. Cloth, $1.50 net.

This compilation on Personal Hygiene by several authors and edited by Dr. Pyle, fills a unique place. Its object is to set forth plainly the best means of developing and maintaining physical and mental vigor. Hygiene of the Digestive Apparatus is considered by no less an authority than Dr. Charles G. Stockton, of Buffalo; Hygiene of the Skin, by Dr. Fox, of New York, and other phases by equally competent men. A very valuable appendix is added which gives the relationship of baths, massage, and so forth, together with suggestions in case of accidents and emergencies. It is a very useful little volume, and one which physicians may safely put into the hands of their patients without fear of inculcating false impressions. The new third edition recently issued has been carefully revised and brought right up-to-date.

Gall-Stones and Their Surgical Treatment. By B. G. A. Moynihan, M.S. (London), F.R.C.S., Senior Assistant Surgeon to Leeds General Infirmary, Leeds, England. Second edition, revised and enlarged. Octavo of 458 pages, beautifully illustrated. Philadelphia and London. W. B. Saun-

ders & Company, 1905. Cloth, $5.00 net. Half Morocco, $6.00 net.

The first edition of Mr. Moynihan's work on gall-stones was completely exhausted in eight months. Mr. Moynihan, by his masterly presentation of operative technic and clear, logical discussion of indications and contraindications, has won an enviable place in contemporary abdominal surgery. In this edition, increased in size by some seventy pages, many additional case records have been incorporated and a number of new illustrations added. We note also the addition of a very valuable chapter—Congenital Abnormalities of the Gall-Bladder and Bile-Ducts. It is evident that the whole text has undergone a careful revision and all recent work along the line of gall-stone surgery included. Mr. Moynihan's book still holds first place in its field. The illustrations are very beautiful, especially the nine colored plates.

Essentials of Materia Medica, Therapeutics, and Prescription Writing. By Henry Morris, M.D., College of Physicians, Philadelphia. Seventh Edition, thoroughly revised. By W. A. Bastedo, Ph.G., M.D., Instructor in Materia Medica and Pharmacology at the Columbia University (College of Physicians and Surgeons), New York City. 12mo, 300 pages. Philadelphia and London: W. B. Saunders & Company, 1905. Cloth, $1.00 net.

The student cannot find a better or more practical work on Materia Medica, Therapeutics, and Prescription Writing than this little essentials from the press of W. S. Saunders and Company. But then, this work is no exception in this respect to all the other numbers of this excellent series of compends. Dr. Bastedo, in revising the book for this seventh edition, has brought it in accord with the new (1905) Pharmacopeia, introducing all the new remedies and carefully indicating their therapeutic doses and uses. For a work of three hundred pages it contains a mine of information so presented as to be easily grasped. We give it our unqualified endorsement.

The "Medical Era's" Gastro-Intestinal Editions.

The *Medical Era*, St. Louis, Mo., will issue its annual series of Gastro-intestinal editions during July and August. In these two issues will be published between 40 and 50 original papers of the largest practical worth, covering every phase of diseases of the Gastro-intestinal canal. Sample copies will be supplied readers of this journal.

The Canadian Practitioner and Review.

Vol. XXXIII. TORONTO, JULY, 1908. No. 7

Original Communications.

THE NATIONAL IMPORTANCE OF PURE MILK.*

By Dr. Charles J. C. O. Hastings.

When we consider that milk constitutes, practically the sole article of diet of infants and invalids and enters into the dietary of all more or less and that it is the most delicate and sensitive food we have, to bacterial contamination, it is surely time that we are waking up to the fact that it is at least as deserving of municipal control as is our water supply or light and power.

Some twenty years have elapsed since the appalling tide of infant mortality came home to thoughtful minds in Germany, France, Belgium and the United States of America, and so engrossed their attention as to stimulate a spirit of investigation, in consequence of which it was soon apparent that this enormous mortality was largely from the ranks of hand-fed children (90 per cent.), breast-fed children only contributing about ten per cent. They also observed that there was a marked seasonal fluctuation, having an abrupt upward curve for the mid-summer months and an equally sharp drop in the autumn. The marked increase in months of July and August was found to be largely due to diarrhoeal diseases, there being very little fluctuation in the non-diarrhoeal cases. In Leipzig[1] for instance, the proportion of deaths to births in August were as 571 to 1,000, of these 430 were diarrhoeal. Dr. Emmett Holt[2], in his article on Diarrhoea, says that of 1,943 fatal cases of which he had collected only three per cent. were exclusively breast fed, and that in his experience fatal cases of diarrhoeal diseases in breast fed infants are extremely rare. Dr. Holt goes on to say it is surprising to see how quickly diarrhoea is excited by impure

*Read before the Section on Public Health and Laboratory Workers of the Canadian Medical Association, held in Ottawa, June 9th, 10th and 11th, 1908.

milk. I once saw in the New York Infant Asylum, every one of the twenty-three healthy children, all over two years of age, and occupying the one ward, attacked in a single day with diarrhoea which was traced to this cause. (A woman was complaining on one occasion to Dr. Osler that Providence had seen fit to take her little child, when the doctor interrupted with the remark: "Providence had nothing to do with it, it was dirty milk.''). In fact, all nations seem to be waking up to the fact that thousands of lives are being sacrificed every year as a result of impure milk, to say nothing of the thousands that have survived the contest but are more or less handicapped all through life, having had to use the energies to battle disease that should have been used for the building up of good sound mind and body.

In Berlin (Germany) the infant mortality among hand fed infants during the hot summer months is twenty-one times greater than among those fed from the breast, the maximum being reached in July when the mortality of the artificially fed children reaches twenty-five times more than that of the breast fed.

In France, of 12,000 deaths among infants under one year of age, 5,660 died in the months of July and August.

In Australia the authorities are gravely concerned about this awful infant mortality. In Brisbane[5], says Dr. Turner, during the summer months more than half of the bottle fed babies die. In referring to this matter Musket, of Sidney, made the statement that of 303,070 dying in New Zealand and Australia in 19 years, one-half might have been saved. Dr. Newsholm[6], M.O.H. for Brighton, said in an article in the *Lancet,* that breast fed children contribute but one-tenth of the diarrhoeal infantile mortality. Dr. Tyson[7] states that 75 per cent. of the 150,000 infants dying annually in Great Britain from all causes are bottle fed. Dr. McLeary[8], M.O.H., for Hampstead, says that infant mortality, broadly speaking, is a mortality of hand fed infants. Investigation in Munich revealed the fact that (83.3 per cent) of the infant mortality were hand fed.

In Germany 41.37 per cent. of the entire mortality for the year occurred in the months of July and August. On the other hand, in Prague, Austria, where nearly every woman nurses her own babe, the hot summer months do not show any increase in infant mortality.

It is quite obvious that cholera infantum is but another name for milk poisoning.

However, I presume there is no other problem in preventive medicine or state medicine so engaging the attention of all civilized nations to-day, as that of the ways and means by which they can best secure a pure milk supply. Unfortunately, in the Province of Ontario, and we may add in the Dominion of Canada, there has been no systematic inspection of milk supplies or bacteriological examination only from a commercial standpoint, except in Ottawa, but the marked similarity of conditions found by dairy inspections and bacteriological examinations in Germany, France, England and the United States of America is quite sufficient to establish a prima facie case upon which we should take prompt action.

Inspection in the United States has revealed spectacles of a most revolting character. The filthy condition of the cow, stables, utensils, and the milkers, and in fact at every turn from the cow to the consumer, the milk is exposed to reinforcements of myriads of bacteria. The conditions in England as reported by some of the officers of health are as follows:—

Dr. Groves[9], Medical Officer of Health in England, referring to many reports from the inspectors, said: "The conditions under which milk is procured in many parts of the country, especially among small dealers, is too awful to describe." Dr. Hime[10], M. O. H., describing conditions which he found in the farms which supplied Bradford with milk, states that he saw children's napkins washed in milk cans, and once he saw articles more foul being washed in milk cans that were to be used in an hour later for dairy purposes. The report of the Health Officer for Derbyshire, Staffordshire and Cheshire[11] stated that the great majority of the dairies and farms visited were in a dirty condition and totally unfit for the production of pure milk. In fact, cumulative evidence of the unfitness of English dairies might be quoted almost indefinitely. Almost identical reports are handed in in all countries in Europe where inspections have been made. In most instances both the stables and the cows were found in a most unsanitary condition; the cows were milked and the milk handled by those who were absolutely ignorant of hygiene or sanitation.

In June last, by invitation of the Great Ormond St. Children's Hospital[12], representatives of the various London children's Hospitals met to discuss their milk supply, the unsatisfactory milk supply having been a matter of concern for some years, but they were deterred from action on the grounds that a better milk supply would entail increased expenditure (human life placed in the scales with dollars and cents, or rather, pounds,

shillings and pence, and found wanting). Having been invited to inspect the various sources of milk supply, Dr. Carpenter, of the Northern Hospital for Children, related his experience, revealing as startling a condition and as grave a scandal as did the condition of the Chicago slaughter houses. The cows were huddled together in ill-ventilated, dark, dingy sheds and a foul atmosphere, all of them besmeared with their own excretions, standing on filthy floors. A batch of dirty men, with dirty hands and filthy aprons, were milking. The strainers through which the milk had been strained were found to contain a plentiful supply of stable refuse. The churns and utensils were washed with water taken from a trough in the yard which was smeared over with manure both inside and out. There was not the slightest evidence of any regard for ordinary cleanliness.

As a result of similar revelations in the United States, milk commissions have been appointed in various States, or, rather, in the principal cities, twenty-seven in all. A conference of these commissions was held at Atlantic City last June, when they merged into a national association for the purpose of adopting uniform methods of procedure to fix on chemical and bacteriological standards and to determine the scope of medical and veterinary inspections. This, of course, to be done in conjunction with the Health Department. Out of samples taken from thirty-one dairy wagons in Washington, only thirteen were fit for food, and of one hundred and seventeen samples examined in one year, only fifty contained less than 50,000 bacteria per c.c.; in fact, some of the samples contained a larger number of bacteria than did the sewage water of the city. In Boston fifty-seven samples showed over 2,000,000 per c.c. The conjoined Milk Commission has advised that all milk containing more than 50,000 per c.c. be destroyed by the Health Department.

Dr. Leslie Mackenzie, medical member of the Local Government Board for Scotland, in the *Edinburgh Medical Journal*, described the method of milking as follows: "To watch the milking of cows in most rural districts is to watch a process of unscientific innoculation of a pure, or almost pure, medium with unknown quantities of unspecified germs. To one who knows the meaning of asepsis it makes the blood run cold to watch, even in imagination, the thousand chances of germ inoculation; rarely is even the precaution taken of washing the udder, which is ofttimes besmeared with excretion from the cow.

Everywhere throughout the whole process of milking the perishable, superbly nutrient liquid receives its repeated sowings of germinal and non-germinal dirt. The hands of the milker

are rarely washed and are usually smeared over with excretion from the cow liquified by the milk used by the milker in the filthy habit of wet-milking. In a word, the various dirts of the civilized human are reinforced by the inevitable dirts of the domestic cow."

That milk is being consumed by us every day that is procured under similar conditions cannot be questioned. How would we like to have bread and pastry prepared by similar hands and in similar environments? And yet we could do so with infinitely less danger to health and life, as the bread and pastry have to be submitted to a temperature that would destroy all pathogenic germs, while milk is used with all its bacterial contamination in activity, and, furthermore, milk constitutes an excellent culture medium for the rapid reproduction of these bacteriæ. Let us contrast this for a moment with the milking of cows under the municipal milk supply of Rochester, N.Y., established in 1899.

A central station, at which the milk is prepared, is organized in a farm outside the city, where a trained nurse and assistant have full control of the cows, bottles, utensils, etc. Everything coming in contact with milk is thoroughly sterilized in steam sterilizers. The milk itself is not subjected to any pasteurizing or sterilizing.

At the milk station on the farm the milk is taken from clean, well-fed, tested cattle into sterile cans, which are carried to the barn in sterile linen bags. Just before milking the cow's udder is well washed. A sterile cheesecloth fly cover is placed over the cow. The first portion of the milk is rejected. As soon as the cans are filled they are immedately covered by a layer of cheesecloth, held in position by a rubber band. The cans of milk, thus covered, are immediately taken from the barn into the laboratory, about two hundred yards away, where the milk is properly diluted, sweetened and turned off into sterile nursing bottles. The bottles are corked with sterile rubber corks, placed in racks, covered with cracked ice, and immediately transferred to the city for use. Of the milk prepared in this way forty-three samples daily were found to average not more than 14,000 bacteriæ per cubic centimetre, while the city milk at the same time approximated 235,000 per c.c.

We must remember, however, that there are some 200 varieties of bacteriæ in milk that produce practically no harm, many of them only affecting the commercial value of the milk by souring, coagulating, etc. But these, as Prof. Vaughan expresses it, should constitute the red lantern or danger signals (others

are excreting or secreting toxic substances). The most common and most virulent of the pyogenic series present is the streptococcus, which is always associated with that most common of all bovine diseases, mammitis or garget, and also in "yellow galt," and what lends a greater degree of danger to the presence of streptococcus is the fact that milk at the temperature of the ordinary living room affords an excellent culture medium for it, laboratory experiments having demonstrated that at the temperature of a living room milk containing 300 per c.c. will increase in 24 hours to 10,000,000; while, if kept at a temperature of 40 there is practically no increase. (Prof. Conn states that in nearly all milk the streptococcus is present, as it is present in the milk ducts and teats even when no inflammatory process was going on. Bergy[13], of the University of Pennsylvania, studied the milk of several cows during the entire period of lactation, and concluded that once the udder becomes infected with pyogenic bacteria the infection persists through several periods. Bergy, in his report to the State Department of Agriculture, Pennsylvania, of a large number of samples drawn in sterile tubes more than two-thirds contained bacteria, more particularly the streptococcus; he found them in half the samples examined from the Philadelphia supply.) The specimens examined in Germany averaged about 75 per cent. infected, except in Leipzig, where Brunning[14] found 26 out of 28 samples containing all the way from 100 to 1,000,000 per c.c. (93 per cent.), Leipzig having the largest infant mortality from diarrhoeal causes of any city with reliable registration outside of Russia. In London, of the specimens examined by Eastes[15], 186 in all, 75.2 per cent. contained streptococci. While these pyogenic bacteriæ are largely responsible for the infantile diarrhoea, they are not entirely so. We have the proteus vulgaris and the various dysenteric types, the bacillus pyocanus, etc.

While infant mortality is the most important factor in determining the necessity of a pure milk supply, the danger as a medium for the spreading of communicable diseases is not much less important. Scarcely a month passes that we have not instances cited of outbreaks of the various infectious diseases traced to the homes of the dairies or vendors. This was especially emphasized by Prof. Kober in the section on Hygiene of the International Medical Congress at Paris in 1900, in a report of 330 outbreaks of infectious diseases through the milk supplies, made up as follows: Outbreaks of typhoid fever, 195; scarlet fever, 99; diphtheria, 38. Dr. Harrington, Secretary of Massachusetts State Board of Health, in a recent address stated

that within the past two years, in the five cities, Boston, Cambridge, Lynn and Everett, there have been eighteen outbreaks of typhoid fever, fourteen of which have been traced directly to milk.

Of still greater significance, however, is "The Second Interim Report of the Royal Commission on Human and Animal Tuberculosis[16]," in which their conclusion was to the effect that a large proportion of tuberculosis contracted by ingestion is due to bacilli of bovine source, and that a very considerable amount of disease and loss of life, especially among children, must be attributed to cows' milk containing tubercle bacilli.

The presence of tubercle bacilli in cows' milk can be detected, though with some difficulty, if the proper means be adopted, and such milk ought never to be used as food. There is far less difficulty, however, in recognizing clinically that a cow is suffering from tuberculosis, in which case she may be yielding tuberculous milk. The milk procured from such a cow ought not to form a part of human food, and, indeed, ought not to be used as food at all. "Our results clearly point to the necessity of measures more stringent than those at present in force being taken to prevent the sale or consumption of such milk."

In January last the Health Committee of Birmingham[17] issued to the City Council the report of the Medical Officer of Health (Dr. Robertson) and the Veterinary Superintendent (Mr. Malcolme) upon the investigations which had been made in regard to the infection by tubercular bacilli of the milk supplied to Birmingham. The collection of the samples of milk was undertaken by the assistant veterinary surgeon of the corporation, and the subsequent examinations were made by Prof. Leith and his staff in the bacteriological department of the University. Between September 13th, 1906, and July 31st, 1907, in 175 samples taken from the churns at the railway stations and other places tubercle bacilli were present in 14 per cent.

Dr. McCaw[18], senior physician to the Belfast Hospital for Sick Children, after twenty years' careful observations and study of tuberculosis in children in connection with his hospital work, in his own hospital, and a careful examination, on exactly the same basis, of the returns of the Ulster Hospital for Sick Children; Great Ormond Street, London; Royal Edinburgh Hospital for Children, Manchester Children's Hospital, East London Children's Hospital, Glasgow Children's Hospital, presents the following significant report:

TUBERCULOSIS.

1906—Belfast Hospital for Sick Children—

No. intern. patients, 827; No. tuberculous, 26.10 %.

1906—Ulster Hospital for Sick Children—
No. intern. patients, 247; No. tuberculous, 30.36 %.
1906—Great Ormond Street, London—
No. intern. patients, 2,876; No. tuberculous, 27 %.
1906—Royal Edinburgh Hospital—
No. intern. patients, 1,968; No. tuberculous, 21.3 %.
1906—Manchester Children's Hospital—
No. intern. patients, 1,999; No. tuberculous, 21.3 %.
1906—East London Children's Hospital—
No. intern. patients, 2,054; No. tuberculous, 24.3 %.
1906—Glasgow Children's Hospital—
No. intern. patients, 1,177; No. tuberculous, 27.95 %.

One cannot help but be impressed with the similarity in the percentage of tubercular cases in all these hospitals.

The conditions found were as follows: Surgical—Tubercular joints, lymphadenitis, chronic abscess, chronic ulcers, lupus, spinal caries, etc. Medical—Phthisis, meningitis and general tuberculosis, in the proportions of about 6 to 1.

This surely demonstrates beyond question the existence of tuberculosis to an appalling degree among children, and at an age when milk constitutes the principal article of diet.

Let us couple with this the views of Professor Von Behring and his followers—that tuberculosis in children is principally disseminated through the alimentary canal, the chief source being tuberculous milk.

For confirmatory evidence, let us revert again for a moment to the findings of the Royal Commission, who, in summarizing their results, concluded with the following statement: "The bacillus of bovine tuberculosis is not so constituted as to act on bovine tissues alone, for it can give rise to tuberculosis in many animals other than bovine. Furthermore, it is not so constituted as to act on bovine tissue with a special energy, for it can give rise to tuberculosis in many other animals as readily, or even more readily, than in bovine animals themselves. (We call it the bacillus of bovine tuberculosis merely because we find it most frequently in the bovine body, it being the cause of bovine tuberculosis.)

"The fact that the bacillus of bovine tuberculosis can readily by feeding as well as by subcutaneous injection, give rise to generalized tuberculosis in the anthropoid ape—so nearly related to man—and, indeed, seems, so far as our few experiments go, to produce this result more readily than in the cow itself, has an importance so obvious that it need not be dwelt on."

However, with such indisputable evidence of the danger to

human life by ingestion of bovine tubercle bacilli, and the fact that 43.51 per cent. of the cattle slaughtered in Leipzig in one year were tuberculous, and, according to reports of the late Professor McFaygden, 30 per cent. of the milk cows in England are tuberculous and 2 per cent. suffering from tuberculosis of the udder, the latter yielding 100,000 quarts of milk daily teeming with tubercle bacilli, to be consumed by the people of Great Britain, one doesn't require to look long for a solution of the startling statement made recently by Sir William Broadbent, when addressing the Council of the Invalid Children's Aid Association, in which he said: "It is a remarkable fact that, while pulmonary consumption has steadily diminished during the past thirty years, there has been no corresponding diminution in the death rate from other tuberculous affections which were especially incident to infancy and childhood; on the contrary, they had distinctly increased."

What, then, is the remedy? For an answer to this question we must look to other nations where close observations have been made and remedial measures applied, which have in every instance been based on state and municipal control of all milk supplies and the establishment of infants' milk depots in all cities of 30,000 and over.

For demonstrations of the value of these methods of securing a pure milk supply we are indebted in the first place to Drs. Variot and Leon Defour of Paris, they having established the first "Gouttes de Lait" in Paris in 1892 and 1894, and there are now more than 100 throughout the country, and have made their influence felt, and now nearly all civilized countries have adopted them. The system has been carefully studied and pretty universally adopted in the British Isles. However, on the Continent of America we are more especially indebted to the American Association of Medical Milk Commissions, the pioneer work of which has been done by Dr. Henry L. Coit, of Newark, N.J.

Our neighboring city to the south (Rochester, N.Y.), under Dr. Goler, has done most creditable pioneer work in demonstrating to the world the role played by dirty milk in infant mortality. They have in operation for two months in the year, July and August, four milk stations, at which milk is handed out to the poor, containing not more than 20,000 bacteriæ per c.c. These milk depots are in charge of a trained nurse, who, in addition to handing out the pure milk properly diluted for the age of the child, also hands a pamphlet to the mother, instructing her in how to care for her children, with the following results: For

the months of July and August, in the ten years preceding the establishing of the milk depots, the deaths under five years of age from *all causes* totalled up 2,297, as against 1,143 in the ten years following the establishing of the milk depots, showing a saving of life for these two months of over 50 per cent. In these reports deaths from all causes are included, as they have very properly concluded that dirty milk as a food necessarily affects the results of all diseases in children. This is accomplished at a cost of $1,000.00 per annum.

Where an absolutely pure milk supply cannot be secured, all milk should be Pasteurized before being fed to babies in the hot summer, as was demonstrated at the New York Foundling Hospital, on Randal's Island. The year before the introducing of the Straus system of Pasteurizing the milk there were 1,181 babies in the hospital, of which 524, or 44.36 per cent. died from all causes. In the year following, during which the system was in operation, the number of children in the hospital was 1,284, and the number of deaths only 256, or 19.80 per cent.

Pasteurizing, like tuberculin, has been condemned by a few because it has been abused by many. Dr. R. Godfrey Freeman, Lecturer on Pedriatics in the University and Bellevue Hospital, in an article on the "Advantages and Disadvantages of Pasteurized Milk," quotes some thirty or forty authorities on the thermal death point of the tubercle bacilli, which is the most resistant of all pathogenic germs infecting milk, and finds in conclusion that a temperature of 155 degrees F. for twenty minutes will destroy the t.b. and all other pathogenic germs, and, in fact, 99 per cent. of all germs found in milk, but will not destroy spores or the toxines that may have already been formed in the milk. All authorities, however, agree that if the temperature of the milk be lowered to 45 immediately after Pasteurizing it will remain absolutely unaltered for 24 hours, but after this time it is not safe, and after 36 hours should be re-Pasteurized before being fed to infants. Dr. Freeman refers to the three methods of Pasteurizing—the commercial method, the home method and the milk depot method. The commercial method cannot be too strongly condemned. It consists in raising the temperature of the milk to 155 for 15 seconds, which is absolutely useless in destroying pathogenic or disease germs, while it arrests the lactic acid ferment, which, when uninterfered with, constitutes such a valuable danger signal. Then there is the home method, in which the Pasteurizing may be carefully carried out, but with want of proper knowledge or proper

means of refrigeration the Pasteurization is practically useless if the milk is not used within a few hours.

On the other hand, the danger of Pasteurizing is that it may cause some relaxation of the eternal vigilance which seems to be so necessary in order to secure anything like clean milk.

A bill providing for the Pasteurization of all milk sold in New York City[19] has been introduced before the New York State Legislature. It would provide that every quart of milk brought into New York City must be put through the process of Pasteurization. The penalty for selling milk which has not been Pasteurized is imprisonment for not less than six months or a fine of $500.00, or both. Provision is also made for the appointment of a large number of milk inspectors.

Mr. Nathan Strauss, who has recently introduced his method of Pasteurizing into Germany, has received the following statement from Prof. Feer, of Heidelburg: "I have recently inoculated five guinea pigs with milk, raw, from tuberculous cows. All five pigs are suffering from a most virulent form of tuberculosis and are sure to die. At the same time I inoculated five others with Pasteurized milk from the same cows, and all of them are in perfect health. There can be no questioning the advisability of all hospitals and public institutions using milk as an article of diet having all milk Pasteurized and refrigerated at a temperature of not higher than 45 if possible."

A deputation[20], headed by Prof. W. R. Smith of King's College, Principal of the Royal Institute of Public Health, recently waited on the Board of Agriculture, to whom they emphasized a report of the Committee of the Institute that the time had arrived when active steps must be taken, in the interest of the nation, to protect the public from the dangers of impure and contaminated milk, and requested that they secure such legislation as would warrant them in adopting more stringent measures in their efforts to secure a pure milk supply. Replying to the deputation, Sir E. Strachy, Parliamentary Secretary to the Board of Agriculture, said that the Board is of the opinion that every possible precaution will be taken to protect the public, and that anything reasonable, which will not harass the trade, will be done.

"A Committee of the National League for Physical Education[21] was formed last year by Sir Lauder Brunton. This committee has now formed a joint committee with the National Health Society, the Infants' Health Society, and the Liverpool Life Preservation Committee, with Sir Frederick Treves as chairman, the object being to secure a universal supply of milk,

pure from the cow and free from disease germs—'clean milk.' An annual system of licenses to dairymen is recommended, renewable only if their premises are kept in a sanitary condition. The corporations of great cities such as Manchester, Liverpool and Sheffield have already obtained special parliamentary powers to enable them to exclude from their districts the milk of cows suffering from tuberculous udders, but as such milk can be sold elsewhere it is proposed that such power be extended to the whole country."

Sir Thomas Barlow, referring to the milk supply to London, said: "It may be stated with emphasis that most American cities are far in advance of British cities in regard to their milk supply. The medical profession and the general public of Great Britain are commencing to recognize this fact, and it will not be long till steps are taken to remedy existing conditions."

We in Canada are already fifteen years behind, but in that fifteen years other nations have done the pioneer work, and it is only left for us to step into the procession and press rapidly to the front, but we must do it now. From the statistics I have already quoted, of Rochester especially, a neighboring city, with conditions identical with our own, what they have saved by securing a pure milk supply we are justified in saying we can save; and from the statistics of this city for the past ten years impure and disease-laden milk has cost the Dominion of Canada in the past year 15,000 lives under five years of age, to say nothing of the thousands that have survived but have been crippled more or less in the contest and the thousands of adults that have had the various transmissible diseases communicated by milk, and the numerous invalids, with whom milk constitutes the main article of diet, at a time when their vitality is low and their powers of resistance weak. In how many of these may not contaminated milk have turned the tide to a fatal issue?

The national importance of this problem is too apparent to necessitate any further comment or justify any further delay.

The solution of the problem is a simple one—Education and Legislation. The education must come largely from the medical profession. The best results have been accomplished through milk commissions acting in conjunction with the various health authorities in educating the dairy authorities and all producers of milk as to the precautions necessary to be taken in order to produce clean milk, and the consumer of the dangers of contaminated milk. The demand will create the supply. However, until we can secure an absolutely pure milk supply our only safeguard lies in proper Pasteurizing and proper refrigerating.

Children that could not digest modified poisoned milk or germ-laden milk will, in the vast majority of cases, be found capable of digesting modified pure milk. But we must secure such legislation as will warrant the necessary steps being taken by the various health authorities that will bring to a successful issue this all-important life-saving problem. We must have a co-operation of federal, local and municipal legislation, and thereby secure complete control of our milk supply, with rigid medical and veterinary inspection, including tuberculin tests of all herds. What other national question could compare in importance with the safeguarding the lives and securing the best physical development of those in whose hands the destinies of the nation must be placed?

At the conclusion of the discussion on this subject, on recommendation of the joint sections on Public Health and Laboratory Workers, a Milk Commission was appointed by the Association, to be known as the Milk Commission of the Canadian Medical Association, with representatives from all parts of the Dominion.

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PRECAUTIONARY MEASURES NECESSARY TO PREVENT INFECTION IN TYPHOID FEVER.

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During the Spanish-American war 86.24 per cent. of the total deaths were from typhoid fever. There were 19,265 cases per 100,000 of the army. Of these cases, 1,463 died.

In 1900 there occurred in the United States 35,379 deaths from typhoid fever. This would represent approximately, taking 10 per cent. (and this is high; 7.5 per cent. is better) as the average mortality from this disease, 353,790, or one case for each 240 of the population for that year. Very few go through life without taking the disease at some time or another. There are no available statistics in this connection for us here in Canada. We probably are not very far behind, though allowance must be made in our favor for our northern situation. Three-quarters of these cases are now preventible. This disease attacks chiefly between the ages of 20 and 30 years, when the monetary value of life is greatest. Aside, then, from the suffering and the heart-pangs this disease alone, during 1900, cost the United States in money, estimating each life as averaging $6,000, $212,000,000. Preventive measures would have cost much less than this. Take one of the measures, water filtration, probably the most important, as an example of efficiency and cost. We may admit justly that three-fourths of the water supplies of the United States need this process. Eighty-five million people need on an average 8,500,000,000 gallons of water per day, or 100 gallons each. Taking as a basis for this calculation the estimate for the New York filtration works for 500,000,000 gallons per day as $10,000,000 for three-fourths of the water used, it would cost approximately $128,000,000. For the removal of the other causes much less would be required. The saving of one year would protect probably for twenty years.

This, I take it, is sufficient example to show us that this disease is important enough for our consideration. It is a preventable disease. The line of attack is fairly well understood. We know the causative agent. Eberth first isolated it in 1880. Koch and Gaffkey proved it in 1884.

The disease cannot be produced by bad air, bad water, faulty plumbing, or climatic conditions. The bacillus of Eberth alone causes typhoid fever. There are diseases resembling very closely, symptomatically, typhoid fever, and so far as the patient is concerned nearly as important. These are paratythoid, para-

colon disease even under certain conditions, colon infection, and the striga bacillus, which gives us a dysentery closely resembling typhoid in many of its phases. All of them are principally intestinal in their lesions. Often other parts of the body are infected as well. Altogether they are so closely related that they are classed as the typhoid or as the enteric group of diseases. The causative agents in each case are transmitted from the patient to the victim by the same routes. The preventive measures for one are those for all.

Typhoid fever is a preventible disease. Every case comes from somebody's neglect or ignorance. A famous hygienist in indignation once said: "For every case of typhoid fever some one ought to be hanged."

This was not always *justifiable*. This disease had not been recognized as a specific disease before 1829, when Louis for the first time differentiated it from typhus fever. Chomel in 1834 gave it its present name. It took some time before this discovery was accepted. The Boston census of 1854 has no mention of it, only typhus. It is a contagious as well as an infectious disease. For a long time many have gone on looking on it as merely an infectious disease. Louis when he first differentiated the disease pointed out that it was contagious. Bretonneau and Trousseau in France, Munchison and Jenner in England, all asserted clearly their belief that it was contagious. Budd in 1873, in his splendid and convincing work, proved beyond a shadow of a doubt that typhoid fever is a decidedly contagious disease—though, of course, not to the same extent as the others with which we are only too familiar. The difficulty of health authorities to have practitioners report their cases, and the so often made statement to their patients by the family physician even now, "No; it is not contagious; it is only infectious," shows that the idea that it is only infectious is not dead yet.

The bacillus of typhoid fever locates itself chiefly in the lymph glands of the body. It overflows into the circulation. This is especially so in the early stages of the disease. Coleman and Buxton isolated from the blood of over 1,000 cases of typhoid fever, 89 out of a hundred in the first week, 73 during the second week, 60 during the third week, 38 during the fourth, and 26 after the fourth week.

During these infections of the blood any of the secretions or excretions of the body may have the bacilli in them, and in some cases these may carry them for years. The patient becomes a carrier. The sweat, the sebaceous secretion, the tears, the saliva, the bile, the urine and the intestinal contents. We are

not sure at any time that any of these can be free from the bacteria. These substances may be dried and be blown about. They may adhere to hands, to clothing, to food; may be expelled in coughing. They may be walked over by flies, fleas, lice, bed-bugs, or other vermin, and be carried to milk. They may be thrown out over the land and be washed over or carried by boots or by insects, toads, worms, mice, and many other ways into wells and water courses. They may thus get to shell-fish, to milk, to water supplies, be blown about in the dust, get onto food, on roofs, and into cisterns and into water supplies.

To prevent infection, then, the following general precautions should be taken by the various ones concerned.

The Patient.—When sneezing or coughing, he should protect from the expulsion of the bacilli from other than a handkerchief surface. In convalescence the handing of dainties to others should not be done. Even handshaking is dangerous. The use of the family-towel should be avoided. Urine and faeces should be voided in such places only where they can be taken care of.

The Physician.—It is his duty to warn the patient about his duty to those surrounding him. He should warn the family and the nurse as to the sources of infection to be avoided. He should make his orders explicit, should write them, not merely tell them to disinfect the stools, etc., but tell them how and what quantities of disinfectant to use, etc. He should not neglect medicinal disinfection in his patient, if it can with comparatively little risk take them—motropin for urinary disinfection, salol or some such drug for intestinal disinfection. Mouth washes and hand washing should be directed to be done frequently. He should report to the health authorities the source of infection, if he can find it, or suspicion.

The Nurse.—Understand the directions of the physician. She should take the greatest care that no part of the excreta of any kind, even in the minutest drops, should get away from the possibility of being disinfected. This may afterwards dry up and blow away, infect herself, or those about. She should see that the windows are properly screened to keep out flies, the doors as well should be screened. She should either disinfect everything that has come in contact with the patient or gather it together in such a way that it may be done by the household.

The Household.—Faecal matter, urine, sputum, and vomited matter, and any other discharge, should be disinfected as soon as possible. Some prefer chemical methods, some heat.

Chemical Lime, unslaked.—Use it dry or as freshly made milk of lime, using as much in bulk as of the substance to be

disinfected, thoroughly mixing. In cess-pools, use three-fifths of lime per cubic-foot of contents. A barrel may be required for an ordinary household cess-pool (milk of lime, 1 in 10 of water). Keep only a few days air excluded.

Chloride of Lime.—The available chlorine is the active principle here. Common grades contain 20—30 per cent. of this; electrolytically produced, it contains from 35 to 40 per cent. Use dry as in the case of quicklime. The latter is cheaper and less odorous, and about as effective. To prepare a disinfecting solution of chloride of lime, dissolve one-third of a pound in a gallon of water. Use a quart of this for each stool. Should be allowed two hours for effect. Should be prepared fresh each day.

Carbolic Acid.—Half a cupful to a gallon of water (5 per cent.). Equal quantities of this with the material to be disinfected should be used, well stirred, and left for two hours. This is expensive. It serves best in disinfecting by soaking bed-linen, underwear, handkerchiefs, towels, napkins, etc., before boiling; as a body wash, 2 per cent. sol. is as strong as the patient can stand.

Corrosive Sublimate.—One in 500 should be used for excreta in equal volume, and give 2 hours' action; 1 in 1,000 is sufficient for bed linen, etc., previous to boiling. If there are any flies about, it is especially necessary to use these disinfectants, with the object of preventing them carrying infectious material about. For bathing after stool. 1 in 3,000 is best.

Aromatic Disinfectants.—Are best for nasal and mouth washes.

Motropin.—For the urine in carriers in 5 to 7 gr. doses three or four times a day until bacilli disappears from the urine. They think much of this at the Hopkins.

Fumigation.—After recovery is useful. *Formaldehyde* is best. The permanganate liberation method is the most generally applicable. The requirements for thorough disinfection are, first, 75 per cent. humidity in the air of the room at the temperature at which the disinfection is done. Temperature should be between 50 and 70 degrees Fahr., and a sufficient quantity of Formaldehyde rapidly evolved. Ten ounces of commercial Formaline (40 per cent. Formaldehyde) should be used for each 1.000 cubic feet of room space.

Heat.—The most effective of all. It is the most neglected. It is the cheapest, and everywhere nearly available. Burn everything that can burned. Boil everything that can be boiled. Use BOILING water for the disinfection of excreta. It is better

and cheaper than all else, and more easily got, but it must be at the boiling temperature. For excreta use three bulks to one of the substance to be disinfected, and stir well to break up the masses. The bacilli are vegetative, and are killed in 10 minutes if exposed to heat of 160 degrees Fahr. The heat will penetrate much better than the chemical will.

The *bath water* should be disinfected as well as the stools and other excreta. It is only a dilution of the same thing, as a rule.

Bed-clothing, towels, napkins, handkerchiefs, sponges, etc., should be disinfected.

Dishes, knives, forks, spoons, and cups should be all boiled.

Any food remains should be burned.

Burial of Excreta.—For fear it is not wholly disinfected, they should be buried when this can be done in unfrozen ground. In this last case it should not be put out in cold storage, but in a proper privy-vault. To bury, dig a trench a foot deep, heaping the earth up at the side. Cover each mass, leaving the rest of the trough trench for the next dosage, and so on.

Privies.—In typhoid this should be, where the "water carriage" system is not available, of the "dry earth" type. In this case use unslaked lime, 5 pounds per cubic foot of the content, and when possible carry away and bury or burn. Such outhouses should be well screened to prevent flies getting in or out, and keep closed. The flies from a lime-covered privy very soon would streak up a chocolate-iced cake exposed a hundred feet away. Flies may fly miles away. The privies should also be protected against the entrance of mice, rats, and other vermin, especially as these will frequently track back over food in the pantry or cellar. Infected material should be handled with very great care in carrying, etc. A drop of faeces or urine might contain hundreds of thousands of typhoid bacilli.

Strict quarantine is not necessary. Isolation as much as possible should be done. Keep children and others from running in and out of the sick room.

Public Authorities.

Receiving Reports.—This should be made as early as possible. Telephone and card. It would be well, too, to have to make provision for the reception of report of suspected cases. Much of the aversion to making a mistaken diagnosis and no report would be removed. Don't be afraid of your town reputation.

Diagnostic Tests.—Positive Widal serum tests and the Diazo test for the urine should be made easily available. Blood cultures would help out very much, where it is possible to carry

through the technique. The sooner one knows what one has to deal with the better for the community.

Disinfectants.—These with proper instructions for their use it would pay the authorities to supply gratis and without too much formality.

Disposal of Privy-Contents, by incineration or other method, should be made easy by the authorities. It also would pay.

Sewage.—Where the water carriage system of sewerage is in operation, the sewage should be disposed of by some of the methods in vogue. To remove the bacteria "land irrigation" and "intermittent sand filtration" of the bacterial methods is to be used. Where simply the removal of organic matter is done and the bacteria let through, as happens with the septic, the contact, and the sprinkling method, disinfection should be done of the effluent from these works.

The *latrines* of boats and railway trains are undoubtedly the cause of infection of some water supplies. These utilities should be made to remove this possibility. With terminal facilities for incineration much of the danger could be removed.

Flies.—A general war should be declared against these pests by the removal particularly of their breeding-places—the open manure-heap and the privies. General screening should be used to prevent their getting into sewers and then into houses.

Water-supplies.—In the crowded state of the population now existing, no open water supply is without danger of pollution. The general adoption of sewage disposal, and, above all, proper water filtration, according to the class of water in question, should be done. Undoubtedly infected waters, in Europe especially, have been made as free from infection as artesian waters from unquestioned soils or the melting snow of the mountain caps. People seem to be frightened off by the cost of this. A filter suitable for a city like Toronto can be built for under $750,000, when 40,000,000 gallons a day would be provided for a daily operating cost of $1.50 per million gallons. It would hardly add one-tenth to the water rate.

Vended-waters are not always safe. Often very little precaution is taken about the protection of their springs.

Food and Milk should be looked after jealously to see that it is not exposed to dust or the possibility of infection, and that in the case of milk a complete control over the supplies of milk be possible.

Prospective Victims.

Boil questionable water. Eat only unquestioned oysters or none. Pasteurize milk. Have screened windows. Keep up

health tone. Don't put your trust in nostrum preventatives, lemon juice or whiskey in questionable water.

Be vaccinated against typhoid if you are going particularly as a military man or nurse to infected localities.

Harrison's last report in the *Journal of the Royal Army Medical Corps,* gives the following figures, that seem to the open-minded, fairly hopeful and convincing:

2207 soldiers vaccinated—morbidity 6.8 per cent., mortality 1.36 per cent.

8,113 soldiers unvaccinated—morbidity 21.32 per cent., mortality 5.18 per cent.

ONTARIO MEDICAL ASSOCIATION.

JOHN HUNTER, M.B.

The recent meeting of the Ontario Medical Association in Hamilton can, very justly, be assigned to a class by itself. In point of attendance it outnumbered any of its predecessors, and in enthusiasm there was almost a surfeit. The weather was ideal, and added greatly in making the meeting very enjoyable. The social features were certainly satiating. Everything that lavish hospitality could bestow, was extended to all who were fortunate enough to be present. The trip through the picturesque peninsula was thoroughly appreciated. The beautiful scenery that was spread out before the eye as the trolleys swept along, and the delicious viands, and fragrant cigars were alike delightfully gratifying to both soul and body. The dinner at the Royal was a princely feast, and the post-prandial oratory had far more than the usual amount of vim. The division of the meeting into three sections—medicine, surgery, eye, ear, nose and throat—worked out admirably. The attendance in each section was large enough to make the papers interesting, and the discussions spirited.

One feature about this meeting stands out so conspicuously, as to practically mark an epoch in Canadian medical history. Anyone who has attended the meetings of either the Ontario or Canadian Medical Association during the past twenty-five years knows full well how zealously the officials and reputed leaders have always striven to preserve the "hall-marks" of traditional medicine. Papers and discussions reiterated, and reiterated the teaching, practice, and maxims of "the fathers." What Lister has said on antiseptics, Gower on neurology, Hutchinson on venereal disease, Lawson Tait on gynecology, *et al,* was always accepted with profound reverence. At the meeting in Hamilton no traditions were held to be either too venerable, or too sacred, to escape keen criticism. The teaching, practice, and dogmas of surgeons, physicans, and specialists were thrown into the crucible and roasted by the fierce fires, kindled by modern research and experience, and in the scientific, as in the physical world, truth, like the pure metal, shone all the brighter for the refining process. The dominant delusions that sway the minds of so many medical men in regard to the value of certain drugs, proprietory mixtures, and nostrums in the treatment of disease were held up to derision. The surgical craze that sees in every case of gastralgia, intestinal, hepatic, or renal colic, an attack

of appendicitis, and rushes the patient to the operating table, was mercilessly censured. The surgery of appendicitis was charged with creating a horrible record, and statistics were piled up to prove the statement. Challenges were flung at the surgeons to defend themselves, but they preferred to preserve a discreet silence, and allow an adverse judgment to be passed on their treatment of appendicitis. For several years past the physician who would hesitate to hand over to the surgeon, any patient suffering from pain and tenderness in the abdomen, to be operated on for appendicitis was looked upon as an old fogey. At the Hamilton meeting it was the hasty, illogical, mercenary conduct of many surgeons in regard to the treatment of appendicitis, that was held up to ridicule. It seemed very strange why there was not a surgeon in the large audience who essayed to defend the modern attitude of surgery in regard to the treatment of appendicitis.

Not only in the medical section, but in all the sections, the independent spirit was always in evidence. The University professors, and the more conservative of the graduates of the old Toronto and Trinity Schools—men who always strive to maintain the decorum and conservatism of the British Medical Association—looked on some phases of the meeting with about as much awe, as a crowd does on the flight of an airship, or a balloon. It was a fine study in psychology to watch the faces of the stereotyped physician, surgeon, and specialist, when some of these delusions were being arraigned in the courts of modern research and experience.

Why this radical change? Why was the psychologic moment kept in abeyance until a meeting was held outside of Toronto?

The answer to the first question is easily found in the vulnerability of so much in our practice of medicine, surgery and the specialties. Take the heterogeneous prescriptions we write—A's favorite is a special drug, B's a proprietary mixture, and C's a nostrum. Again, how absurdly illogical some phases of our work are? We all know that nutrition is one of the most vital factors connected with the treatment of many patients. Now, as a rule, what attention is given to this factor? We very properly seek to make an accurate diagnosis, to prescribe efficient remedies, and to have these dispensed by a competent druggist. We suggest certain articles of food, but what effort do we make to ascertain the qualifications of the cook? Do we not often leave the preparation of the food and the method of serving it—the very factors on which the life of the patient may depend—to an ignorant cook, "who may not know how to peel potatoes." A

delicate woman with fastidious tastes—and a good cook herself—may, when sick, have food brought to her bedside with such a lack of taste in the way it is served, and so improperly cooked, that it would almost nauseate an Indian, who perchance may have feasted erstwhile, on a moribund 'canis.' The writer very vividly remembers a consultation held some years ago with a well known Toronto physician. The consultant fully agreed with his diagnosis and treatment, but he had not the same faith in the mother's cooking. He spent about an hour teaching her how to prepare the child's food. Had the writer taken as much pains to see that the food was properly prepared, as he gave to verifying his diagnosis and medical treatment, the child might have been saved. Until we, as physicians, assure ourselves that the diet we order is properly prepared and tastily served, we leave ourselves vulnerable to be attacked, not only for being illogical, but also for being grossly negligent. Another cause for the radical change is to be found in the attitude that is growing stronger every day, viz., that there is too much surgery being done, and too many rushing into it. Surgery is now recognized as the "broad way" to success, and "many there be that find it." We have a host of very fair operators, but where are the men, whose broad literary culture, or whose scientific knowledge—especially in pathology and anatomy—is so profound as to give them the status of great surgeons? So long as our operating rooms are thrown open to any one who chooses to operate, we must expect to have a great deal of odium cast upon scientific surgery. Illiterate men cannot contribute very much to surgical literature, and men with few opportunities for acquiring experience, and with only a meagre knowledge of anatomy and pathology, are they, who swell the mortality rate in such a disease as appendicitis.

The opprobrium cast on much of the work of the specialist must be shared by the physician, in part at least. The specialist may overestimate the importance of some morbid conditions in his special field, but does not the family physician only too often act as though he had done his whole duty to his patient when he has handed him over to the specialist! It is the duty of the family physician to see that his patient is kept in the best possible physical and mental condition when under the care of the specialist, for operative work on nose, throat, eye or ear is often very trying to the patient, hence the complaint so frequently heard from our patients, that they feel worse than they did when they went first to the specialist.

The above defects are a few of the many in the art and science

of medicine that invite criticism. But on the other hand, there is scarcely an individual, certainly not a home, hamlet, town or city in the civilized world that has not been blessed beyond computation by our art and science. When we consider the pain that has been relieved, disabilities removed, lives prolonged, we find the sum total of the beneficent work of medicine and surgery outweighs the effects of the errors that have crept in, and the mistakes that may have been made, as the mountains do the neighboring hills. However, honest, intelligent criticism should be welcomed at our annual meetings, "for when men cease to be independent dry rot sets in." In medicine, as in morals, "eternal vigilance is the price of virtue."

Now, in regard to the second question. Why was the phychological moment kept in abeyance until a meeting was held outside of Toronto? The answer to this is quite evident. Toronto is the medical center of the Province. In it the influence of the medical faculty of the University is most potent. When the Ontario Medical Association meets here its members find themselves, perhaps somewhat unconsciously, swayed by the associations of other days, when they were students, and some members of the present faculty their teachers. It is not surprising that under such circumstances the spirit that inspires criticism should be somewhat curbed.

Now, criticism must of necessity come from those not attached to the University faculty. A University professor is not free to express any opinion not sanctioned by the whole staff, and not in full accordance with its teachings. The position of a professor in his University is quite analogous to that of the member of a cabinet to government measures. Take for example, the Right Hon. John Burns and Right Hon. Lloyd George. When in the ranks they made furious attacks on many measures, it mattered not from which party they emanated. Now, as members of a Cabinet, their words are very guarded, and they are only heard in propagating government measures, or in defending them. The very same restrictions surround the University professors, and therefore any medical society, or association where their influence predominates, must of necessity be but a reflex of the traditions of the University. The University faculty has its own sphere to fill, and within it there is abundant room for the exercise of talents and culture of the highest order. The work of the medical society, or association is entirely different. The duty of the former is to teach what is known to be true, that of the latter to criticize, to compare notes, to discuss opinions and theories, to project new lines of thought, etc. It is seen

then, from these fundamental distinctions, between the functions of a University faculty and the functions of a medical association, that the freedom of the latter must be somewhat constrained when its meetings are held in Toronto. If the Ontario Medical Association is to fill its own mission it must do so in its own way, and therefore must always be kept free from any dominating influence of the University faculty. Their missions are entirely different and the line of demarcation should be preserved, a clear and distinct one. If the Ontario Medical Association is to fill its high vocation, its officers should invariably be chosen from the profession outside altogether of the University faculty There should always be preserved the best of mutual feeling betwen the two, but each should recognize its own obligations, and strive to discharge them faithfully. The Association should hold its meetings outside of Toronto frequently enough to insure independent action.

Selected Article.

THE TREATMENT OF SEASICKNESS.

By B. R. O'Rielly, M.D., M.R.C.S. Eng., L.R.C.P. London, Toronto, Canada.

There is no disease which will tax the "ship surgeon's" resources to such an extent as a severe case of *mal de mer,* for not only has he to deal with the physical manifestations, but added to these are those mental symptoms of apprehension, etc., from which frequently the patient suffers far more than from the nausea and vomiting itself.

Seasickness declares itself in several distinct ways. In my experience none can compare, from the patient's standpoint, with that nervous type showing itself in intense occipital headache, severe spinal neuralgic pains, mental trepidation, etc. (frequently unaccompanied by vomiting), and, although a certain amount of relief may be afforded, these patients can seldom be given any permanent degree of comfort.

One can divide cases of *mal de mer* into two classes, for the purpose of laying down certain general rules as to their management, i. e., the "gastric" and "nervous." In the former group we meet with every degree of suffering from simple vomiting unaccompanied by nausea to uncontrollable emesis, with the serious problem, during a long voyage, of the maintenance of nutrition before us.

Prophylaxis may be of great service, especially in this form, and it is here that on the second night before embarking a full dose of calomel, followed the next morning by a saline draught, or large warm water enema, has its place; minor points, such as a cup of hot tea or coffee before rising, abstinence from the time honored tramp before breakfast, a somewhat hasty plain meal, and immediate recourse to a lounge chair on deck, should never be forgotten. Some individuals experience excellent results from a dose of effervescent saline on waking, or a full tumbler of sea water, in the latter case the induced emesis apparently acting as a gastric sedative, and this is the favorite method adopted by Chinese sailors in the Orient.

Occasionally a firm abdominal pad or binder, or a belladonna plaster over the epigastrium, will add not only to the patient's

comfort, but in certain individuals may even ward off an expected attack.

The patient should be warmly and comfortably clad; nothing adds more to the misery than sensations of cold. Encourage the sufferers to take a moderate amount of nourishment, the stomach being less impressionable during the process of digestion.

For the relief of nausea uncontrolled by simple remedies such as have been suggested, one must have recourse to more active measures, and foremost among these comes the application of sinapisms to the epigastrium; gastric lavage is often eminently successful, and this opportunity may be used for the introduction of such drugs as bismuth, carbonate, creosote, hydrocyanic acid, or cocaine (in doses of 1-8 grain), into the stomach; drachm doses of glycerin have also been recommended. These having failed, we have still several means at our disposal for relieving the depression, even if we cannot control the active emesis, and it is in these cases that the use of the hypodermatic syringe finds its place. In individuals who know by experience that severe nausea and vomiting are inevitable, a prophylactic injection of 1-100 grain of atropine sulphate combined with 1-50 grain of strychnine sulphate will do much to inhibit its onset. The drug on which I place greatest faith is nitroglycerin, in doses of 1-100 grain, the subjective symptoms of depression frequently being ameliorated, even though vomiting persists.

The use of champagne and the sucking of ice may be allowed, although it is doubtful if much value can be attached to their action, beyond the mental impression they produce, and in the same category I place the use of brown paper over the abdomen and many other similar expediencies. Lastly, it may be necessary to relieve thirst with saline injections and employ nutrient enema to support nutrition.

Turning now to the nervous type of the malady, one's advice and procedure as to prophylaxis is similar, but following this a different course of treatment is usually found to be advantageous. Theoretically, the nausea and vomiting being ascribed to a central reflex disturbance (possibly due to an alteration in the normal conditions of the endolymph and perilymph of the semicircular canals), the etiological factor being the same, one's treatment of the two forms should be similar.

Experience teaches us that it is here the sedatives are of greatest value, and probably none are more useful than the bromides (given in doses of 20 grains every six hours for at least two days before embarking, preferably the strontium salt), or chloretone in 5 grain gelatin capsules or paraffin wafers, and

repeated every four to six hours (it is officially known as trichlortertiary butyl alcohol, is a crystalline salt, nearly insoluble in water, volatilizes at low temperatures, and should therefore be kept in glass stoppered bottles).

One may, especially in cases of headache and spinal pains, get marked relief from the "coal tar" products, and of these phenalgin (which contains ammonia) is the safest and least depressant, and in my experience is the most reliable. Hyoscine has been used extensively, but cases have been reported in which mania lasting for several days has been the outcome; lastly, and never to be used except in the most extreme forms, comes morphine.

In concluding let me emphasize the fact that, while seasickness is seldom in itself a menace to the life of the patient, it may, and not infrequently does, precipitate serious complications, such as cerebral hemorrhage or the rupture of a previously existing gastric ulcer, and that the treatment of even the apparently mild cases should receive more than a passing thought; finally, the future holds out to us the hope that in the "gyroscope" we may find an antidote which will displace entirely our present system of therapeusis, and that ultimately *mal de mer* will be a disease of the past.—*N. Y. Med. Jour.*

Progress of Medical Science.

MEDICINE.

IN CHARGE OF W. H. B. AIKINS, F. A. CLARKSON AND BREFNEY O'REILLY.

Von Noorden's Oatmeal Diet in Diabetes Mellitus.

J. B. Herrick, Chicago (*Journal A. M. A.*, March 14), describes the composition of the von Noorden oatmeal diet for diabetics and the method of its use, and gives his personal experience with it in the treatment of this disease. The diet consists of 250 grams of oatmeal, from 250 to 300 grams of butter and 100 grams of some vegetable albumin, such as roborat, or for this substance, six or eight eggs or the whites of eggs may be substituted. The oatmeal is cooked thoroughly in water for two hours, the butter and eggs are well stirred in when the cooking is nearly done, or the whites of the eggs are beaten up and stirred in later. Salt is added to suit the taste. This forms one day's ration for an adult, and may be given in from three to eight portions. Von Noorden advises feeding every two hours; he occasionally allows a little clear coffee or a few sips of sour wine to relieve the monotony. The oatmeal may be served as gruel, mush, or, as Herrick has allowed, as fried mush. Von Noorden claims that this diet, given in many cases of severe diabetes will ward off threatening coma and establish a carbohydrate tolerance. It is not of value in the milder cases, and is not infallible in the severer ones, but in a certain number of these, in which emaciation, weakness, polyuria and glycosuria persist in spite of careful treatment, and when a study of the urinary content in acetone, diacetic and oxybutyric acids and ammonia shows acidosis with threatening coma, it has its greatest field of usefulness. Selection of cases and individualization are essential, and in mild cases it may do harm. The diet should be continued about two weeks and the return to the ordinary diabetic diet should be gradual. The objections to it are mainly its lack of appetizing qualities, and this can be met to some extent by care in the preparation and mode of administration of the food. It is not easy to explain just how it produces results so contrary to what might be expected, or why it does not increase the sugar and

acetonuria, but the clinical facts show that it does not. Herrick quotes the testimony of others and gives his own personal experience, reporting and commenting on a dozen cases. Several of these were of a rather mild type, and in these he has seen no evil effects, though the results were not so striking as in the severer ones. The good effects were especially noticeable in the diabetes of the young, a form notoriously hard to manage and of unfavorable course; two of the reported cases are of this type. In conclusion he says: "I would in the main confirm von Noorden's claim for the oatmeal diet. While occasionally the stomach will rebel and refuse to tolerate this food for any great length of time; while the diet is not suited to all cases, being of least avail in the milder forms; while it fails even in some of the severer types, and while no claim for a cure of diabetes can be made, this diet still remains a most valued therapeutic agent for the warding off of impending coma in the severer types of diabetes and for assisting in the establishing of a tolerance for carbohydrates. In the milder types of diabetes I have so far seen no ill effects follow its use, but the benefits have been trifling. My experience in using it in the diabetes of moderate severity has in general been favorable, it being of special help in establishing tolerance for carbohydrates. In the diabetes of children, if employed early, it seems to exert an unusually favorable influence."

Functional Dyspepsia.

Hutchison divides functional dyspepsias into four forms, corresponding to the four physiologic functions of the stomach, viz.: 1, Secretory; 2, motor; 3, sensory, and 4, absorptive. The last being a limited function, is dismissed. Functional dyspepsias, therefore, fall into the following classification:

1. Secretory..	Excess:	hyperchlorhydria and hypersecretion.
	Defect:	hypochlorhydria and achylia.
2. Motor.....	Excess:	pyloric spasm.
	Defect:	atony and motor insufficiency.
3. Sensory....	Excess:	hyperesthesia.
	Defect:	(?) anorexia and diminished capacity.

Any one of these forms may occur alone, but frequently one finds two or more co-existing. Hutchison discusses the treatment of each form in detail. In excessive secretion the indications will be best met by a regimen into which milk, eggs, meat and fish enter freely, while the starchy foods are kept within strict limits. Medicinally, neutralizing drugs, of which the earthy oxids (magnesia is to be preferred) should be given when the

secretion is excessive, i. e., about two hours after meals. 'In defective secretion the actual composition of the diet is indifferent, provided it be given in a suitable mechanical form. Medicinally, the indications are to stimulate the natural secretion or to replace it artificially. The bitters effect the first end, alone or with small doses of sodium bicarbonate. The second, theoretically, would be attained by administration of ferments, but in practice this has proved to be almost worthless. Full doses, say 1-2 a dram (2.0 gms.) of the dilute hydrochloric acid, after meals, are sometimes of service in restraining some of the secondary symptoms, e. g., "gastric" diarrhea. In the excess form of motor disorder the dietetic treatment must consist mainly of milk supplemented by soft farinaceous foods; medicinally, antacids, bismuth, antispasmodics, e. g., carminatives, and especially opium in small doses before meals, are indicated, with local fomentations, etc., to the epigastrium. Motor defect calls for avoidance of all hard, tough, indigestible food, and of fluids, the diet being dry; medicinally, muscular tonics are indicated—strychnin, alcohol, mineral acids, certain aperients, particularly aloes. Massage, perhaps electricity, and hydrotherapeutics are useful measures. Anesthesia is the only sensory disorder of which we have any knowledge. Blandness should be the characteristic of the diet, while medicinally we have many gastric sedatives, especially bismuth, the bromids, hydrocyanic acid, hyoscyamus, cannabis indica, chloral and chloroform. Also the local application of heat is useful here also. While these lines will not always be successful, Hutchison holds that this is the only way of approaching this disorder that can be called rational and scientific.—*B. M. J. and J. A. M. A.*

Intermittent Limp.

An article by Ernest Reynolds, of Manchester, appears in the November number of the *Medical Chronicle* relating to the above subject; it was first described by Charcot in 1859 under the name of "Intermittent Clandication of the Arteries," and by Erb in 1898 as "Digsbasia Argioseleratica." The writer prefers the name used in the heading, as the others above mentioned both point to a preconceived theory as to the cause of the condition.

The essay is based on the clinical pictures found in five cases seen by the author, in all of which the physical signs were practically similar, and are as follows:

"More or less suddenly a man, previously healthy, experiences pains in the foot, ankle and calf, together sometimes with cramps

of the muscles, which cause him to stop, and if he looks at the foot finds it cold and bloodless. On resting, however, the pains gradually disappear and color slowly returns in red patches, which ultimately run together. On resuming the walk, however, the symptoms return, so that it becomes impossible for these patients to walk any distance. Physical examination reveals nothing except an absence of pulsation in the dorsalis pedis, and generally also in the posterior tibial artery. The muscles are often well developed and there is no sign of any affection of the nerves. As a rule only one leg is effected, cases have been reported in which an arm was involved." The condition, a well known one among horses, is called by French veterinaries "boiterie," and is identical with that found in man.

The connection between angina pectoris, due to curanary selerasis, the earlier symptoms which terminate in gangrene of the extremities and this condition is of interest; the pathological findings are narrowing obliteration of the arteries supplying the limb, in some cases this extends even into the smaller branches; in some cases there has been found some degeneration of the nerves supplying the muscles, but as a rule both the latter are healthy. The microscopical appearance in the arteries is that of an obliterative endarteritis. The disease may well be termed "angina cruris," it appears to have no definite relationship to general arterio-sclerasis and no etiological factor has as yet been discovered, its course is indefinite and may terminate in gangrene. Beyond keeping the limb warm, avoiding tight boots and exertion, treatment is of little avail.

The following review of a paper published in the *Munchener Mediginische,* Wochenschrift, of February, 1908, appears in the *Medical Record* and we reproduce it in full as follows:

A Diagnostic Skin Reaction With a Tuberculin Ointment.— Moro has found that a specific reaction may be induced in tuberculous subjects by means of inunction with an ointment containing tuberculin. For this purpose he uses an ointment of anhydrous lanolin containing 50 per cent. of old tuberculin. When kept in the ice box the preparation retains its efficiency for months, and 10 g. is sufficient for about one hundred tests. The application is made to the skin of the abdomen just below the end of the sternum, or if this is not free from cutaneous lesions the neighborhood of the nipple is used. A portion of the ointment the size of a pea is rubbed in with the finger, using moderate pressure for a half to one minute. The area treated measures about five centimeters in diameter. The skin is left uncovered for about ten minutes but no dressing is applied. In

negative cases the skin showed no reaction but in others a positive result was manifested by the appearance of an eruption of papules at the site of inunction. Three grades of this are distinguished. (1) A weak reaction in which from two to ten solitary, small, pale papules appear in twenty-four to forty-eight hours and vanish again in a few days. (2) Medium reaction, in which in the course of the first twenty-four hours up to one hundred or more miliary or larger red papules which may measure three millimeters in diameter appear. The skin in the neighborhood is moderately reddened but the eruption is confined to the site of inunction, itches slightly, remains unchanged for several days, and then slowly fades. (3) Strong reaction, shown by the appearance within a few hours of very numerous red papules with inflammatory base and accompanied by itching. There is exudation into some of these lesions which may measure five to eight millimeters in diameter; the eruption is not confined to the site of inunction but extends to the surrounding parts. In a few days the papules dry up and become scaly and in two weeks nothing is to be seen except a brownish pigmentation of the skin. None of the forms of reaction is accompanied by general symptoms or elevation of temperature. The author believes that the reaction is strictly specific though somewhat less sensitive than the von Pirquet cutaneous reaction or the ophthalmo-reaction. Its value as a diagnostic measure must be determined by further observations in a large series of cases. The method has the great advantage of being entirely harmless, even the itching at the site of inunction being a comparatively rare occurrence.

No Special Providence.

It makes us "falter where we firmly trod" to feel that man comes within the sweep of these profound and inviolate biological laws, but it explains why nature—so careless of the single life, so careful of the type—is so lavish with the human beads, and so haphazard in their manufacture, spoiling hundreds, leaving many imperfect, snapping them and cracking them at her will, caring nothing if the precious cord on which they are strung—the germ plasm—remains unbroken. Science minimizes to the vanishing point the importance of the individual man, and claims that the cosmic and biological laws which control his destiny are wholly inconsistent with the special Providence view in which we are educated—that beneficent, fatherly Providence which cares for the sparrow and numbers the very hairs of our head.—*Dr. Osler.*

The Aim of Therapeutics.

Therapeutic tactics are the art of making the best use of these remedies, and this he hopes to teach. It is the duty of the medical practitioner not only to sustain the patient's supreme consolation of hope, but to cultivate it in himself, so that his patients shall not be able to reproach him by saying "You have "not cured me, you have not relieved me, you have not com- "forted me." However mortal the disease, we should preserve this latent hope, and use every means that ingenuity can suggest when science fails; such energy and tenacity, he said, meet with occasional unexpected rewards, and he reminds us that the Roman Senate and people granted triumphant honors to those beaten soldiers who had not despaired of victory. We hesitate to spoil the effect of these eloquent words by any kind of criticism, but we may express a doubt whether it is possible to make such a subject as clinical therapeutics anything beyond the dogmatic expression of the experience of the occupant of the chair for the time being.—*British M. J.*

SURGERY.

IN CHARGE OF EDMUND E. KING, GEORGE A. BINGHAM, C. B. SHUTTLEWORTH AND F. W. MARLOW.

The Present Status of Spinal Analgesia.

By Dr. Strauss (*Dtsch. Zeitschrift. f. Chir.*).

Based upon a critical review of the scattered material, the author arrives at the following conclusions:

At the present time, tropacocain must be regarded as the most harmless remedy for the production of spinal analgesia. Even this, however, is not free from by-manifestations, and cannot be considered as absolutely harmless. Donitz reports the case of a man 75 years of age, who died after the injection of 0.13 tropacocain. The normal dose is 0.06; the dosage should be rather less than more. Higher analgesias may be obtained by elevation of the pelvis, and aspiration of considerable amounts of spinal fluid. The addition of adrenalin should be omitted, since it increases the danger. The most rigorous observation of the technique is absolutely essential. The average duration of the anesthesia is one hour. The lower extremities, the perineum, and

the lower abdominal region can be anesthetized with a certain degree of positiveness.

The procedure is indicated in old, decrepit individuals; in cases of non-tuberculous lung disease; in diabetic patients. The contra-indications are youthful age of the patient, up to 15 years; affections of the brain and spinal cord; neuropathic or psychopathic conditions. The possibility of getting along with local anesthesia likewise excludes the use of spinal analgesia. Especial care is indicated in all tuberculous processes and kidney diseases, also in syphilis and advanced arteriosclerosis. The method as such is not devoid of danger, and its employment should always be surrounded with certain limitations. While the untoward phenomena or sequelæ may be considerably diminished by proper technique and selection of the cases, it is impossible to avoid them entirely. In conclusion it may be stated that in suitable cases spinal analgesia, although never absolutely free from danger, offers numerous advantages when properly performed.—*The Post-Graduate.*

OBSTETRICS AND GYNECOLOGY.

IN CHARGE OF ADAM H. WRIGHT, K. C. M'ILWRAITH, FRED. FENTON AND HELEN MACMURCHY.

Myomectomy During Pregnancy.

At a meeting of the Obstetrical and Gyecological Section of the Royal Society of Medicine, London, on March 12th, Dr. Herbert Spencer (President) in the chair, Drs. Walter Swayne and J. H. Dauber having described some cases in which myomectomy had been performed during pregnancy, Dr. Spencer said that, while not criticizing the three cases reported, in which the operations were done for definite and serious indications, he felt bound to express his strong opinion that operations in the case of fibroids complicating pregnancy were rarely called for, and that myomectomy, which was occasionally urgently demanded in the case of very large, or impacted, or rotated tumors, was, in relation to the frequent occurrence of this complication of pregnancy, very rarely required, and, as the cases exhibited that night showed was attended by conpostponed till the child was viable. Dr. Amand Routh

thought Dr. Swayne's statistics, tending to show that fibroids were so serious a complication of pregnancy that operations were frequently justifiable, were out of date. He had collected statistics showing that the maternal mortality of such cases under modern methods was only slightly in excess of the normal. Abortion did not more often occur where fibroids were present, though labor often ensued a few weeks before full time. He had only twice had to perform Cesarean hysterectomy at or near full term, and never at an earlier date, though he had seen many cases of fibroids blocking the pelvis in the early months. The fibroids in such cases almost invariably underwent flattening and softening (*assouplissement*), and were gradually or suddenly displaced out of the pelvis, sometimes as late as the onset of labor itself, and labor spontaneously occurred without assistance. Dr. Arthur Giles said that speaking in generalities would lead to confusion and inaccuracy. To say that the complication of fibroids and pregnancy was generally unimportant was as much beside the mark as to say that it was generally dangerous. The existence of fundal fibroids might make no difference to pregnancy or labor, but cervical fibroids impacted in the pelvis were in a totally different category.

Diagnosis of Early Pregnancy.

L. J. Ladinski (*Med. Record,* April 13, 1907) describes as diagnostic of early pregnancy the following sign elicited by bimanual palpation. Frequently as early as the fifth week, but always in the sixth week, there can be felt in the median line in the anterior wall of the body of the uterus just above the junction of the body and cervix a circular area the size of the tip of the finger, which presents the sensation of an elastic fluctuation. This area increases in size in a crescentic manner, until between the third and fourth month, when nearly the entire anterior body, with the exception of the upper crescent of the fundus, partakes of this change, and gives the cystic fluctuating feel to the examining finger. The change appears in the anterior wall of the uterus when the uterus is in the normal position or slightly anteverted, but in extremely retroverted or retroflexed uteri the elastic area appears in the posterior wall, but, instead of being perceptible in the fifth or sixth week of pregnancy is usually felt in the sixth or seventh week. In incomplete abortion or subinvolution, there is a change in the consistency of a similar area of the uterine wall, but, while in pregnancy the feel of this area is distinctly elastic or cystic, the sensation obtained in subinvolution and incomplete abortion is soft and doughy.

Deep Incisions of Cervix Uteri.

Mason reports two cases of rigid cervix treated by Duhrssen's deep surgical incisions. He describes the technic and concludes as follows: 1. When immediate delivery is demanded in the presence of an undilated and rigid cervix, multiple deep incisions from the border of the external os to the uterovaginal junction furnish the most rapid and safest method of emptying the uterus. 2. There is no danger of the incisions tearing in patients under full term, or in patients at full term, in whom the pelvis is normal and the fetus is of moderate size. 3. There is no risk of hemorrhage when clamps are employed before making the incisions. 4. The chance of septic infection is no greater than after the lacerations occurring at the time of normal delivery. 5. The scars in the cervix and vaginal vault cause no trouble in the course of subsequent pregnancies and labors.—*Jour. A. M. A.*

Pyuria in Women.

Dr. Henry D. Furniss, New York, in speaking of pyuria, said not all cases of purulent urine should be included. Only those cases in which pus is from the urinary tract were considered. Whenever pus is found in the urine, the first effort should be to locate its origin and determine the etiologic factor. The majority of the inflammatory disorders of the genito-urinary system recover spontaneously after the removal of the cause. In the acute cases there is not much difficulty in locating the origin of the pus, for the local symptoms are sufficiently intense to point to the source of the trouble. If there is pus in the bladder urine, if the bladder is catheterized and carefully washed, and a second specimen obtained by means of a catheter an hour later contains the same amount of pus as the first; the inference is clear that the pus is derived from a source outside of the bladder. With the aid of the cystoscope, one can determine the nature, the extent, and often the cause, of the lesion with which he has to deal.—*Jour. A. M. A.*

The Treatment of Peritonitis.

McGuire describes the practical steps of the Fowler-Murphy method as follows: Open the abdomen over the seat of the primary focus of infection and correct the trouble, whatever it may be, so as to prevent the admission of further poison. Make a second short incision immediately above the pubes, and insert a large rubber drain to the bottom of the pelvis. The work

should be rapid, with as little manipulation of the viscera as possible, and no effort should be made to remove the pus by sponging or irrigation. Place the patient in bed in an exaggerated Fowler's position. Give saline solution by continuous low-pressure rectal irrigation; administer morphia, in small doses, for pain and spartein, in large doses, as a general stimulant and prophylactic against suppression of urine. Purgatives should not be employed, but bowel action secured by the use of enemata. If there is much nausea or vomiting the stomach should be thoroughly irrigated and no food should be given until the patient can retain and assimilate it.

By the adoption of the method outlined McGuire has seen a great change in his mortality. A recent analysis of the last 500 cases of appendicitis operated on in his private hospital gives a record of twenty-four patients with diffuse suppurative peritonitis. The first six were treated by the old method of irrigation and multiple drainage, with five deaths. The last eighteen were treated by the Fowler-Murphy method, with but one death.

Prolonged First Stage in Primiparae.

Das *Journ. Obstet. and Gyn.*, March, 1908) reports two cases of primipare in which the first stage of labor was unduly prolonged until he ruptured the membranes, after which rapid progress was made. In both cases the membranes were unusually tough and hard, and the forewaters were scanty, the membranes did not bulge, but became tense with the occurrence of the pains. In the first case, before the rupture the os admitted three fingers with difficulty, it was fully dilated three hours later. In the second it took the os sixteen hours to dilate to two fingers' breadth, and less than an hour for the remainder of the first stage and the whole of the second stage to be accomplished. The writer has encountered many cases of a similar kind, always in primipare. In some of his earlier cases, thinking the delay to be due to adhesion of the membranes, he tried detachment of the membranes from the lower uterine segment. This, however, had no effect until he ruptured the membranes, which were not doing their work. On a close examination of the secundines the placenta is found to have a low insertion, and this condition is apparently the chief factor in causing the delay by not allowing the lower uterine segment to retract past the membranes, which are applied closely over the fetal head. When the following conditions are present, rupturing the membranes will expedite labor: Prolonged first stage, presenting head low in the pelvis,

primipara, os soft, dilatable, and generally thin, very little forewaters, membranes tough and not bulging through during the pains. Textbooks do not call sufficient attention to this point; on the other hand, the teaching that the membranes should be preserved as long as possible contributes towards longer delay and more suffering. These are the cases where premature rupture of the membranes will help dilatation and expedite labor.—*Brit. Med. Jour.*

Dry Labor.

The early escape of the amniotic fluid is a serious loss to the fetus. Not only is the progress of the first stage interfered with, but the fetus suffers from direct uterine pressure. The localized pressure of the cervix on the head may induce congestion, edema, and even hemorrhage of the brain. The violent contractions that are common in this condition are harmful alike to both mother and child. If it is possible to insert a metreurynter between the cervix and the presenting part of the fetus, saline solution may be injected in to the uterine cavity when its walls are relaxed, under chloroform, if necessary, and retained by means of the bag. By this method, it may be possible to avoid the dangers of a dry birth.—*S. H. M. Stowe (Surg. Gyn. and Obstet.)*

Opiates After Operation.

Pain is the one symptom common to all patients after an operation, and demands constant consideration according to Moore. As already suggested, much can be done in the way of prevention, but after that our sheet-anchor is opium in some of its various forms. Morphia administered hypodermatically is the universal favorite. Codeia and other milder preparations are disappointing and should only be used where the patient is known to have a marked idiosyncrasy against morphia. When morphia is indicated, is should be given in full doses—usually one-fourth of a grain—because a smaller does does not have the desired effect and is just as liable to be followed by unpleasant effects as a large one. It is our mission on earth to relieve pain, and in post-operative treatment we have a great opportunity. One who denies his patients an opiate after an operation, on theoretical grounds, is in error, and would very quickly change his views were he the patient. At one time I, in common with most surgeons, denied my patients opiates after abdominal operations, on the theory that they caused gas and consequently greater suffering. My patients differed from me at the time and

censured me afterwards, and after long experience I am thoroughly convinced that they were right. All patients have some discomfort from gas after the abdomen has been opened, but my patients have infinitely less suffering now than they did when I denied them this boon. Some able surgeons of large experience are now giving a hypodermic of morphia to these patients before they recover from the anesthetic, as a routine, and while I have not yet adopted the routine, I am inclined to believe that this will eventually be the accepted practice. As long as the hypodermic syringe is kept in the hands of the nurse, and its use discontinued when the surgeon decides that it is no longer needed, any fears of establishing a habit are only theoretical. Post-anesthetic vomiting is not a contra-indication for the hypodermic, but, on the contrary, it is often helpful in this condition.—(*Surg. Gyn. and Obstet., Amer. Med.*)

Repeated Symphysiotomy.

Robert Jardine (*Jour. Obst. and Gyn. Brit. Emp.*) performed symphysiotomy three times on the same patient. Six weeks after the last operation the patient could walk.

A Case of Toxemia During Pregnancy.

At a meeting of the Philadelphia County Medical Society, Dr. William Campbell Posey and Dr. John Cooke Hirst.

The writers reported a case of toxemia during pregnancy where the ocular symptoms, which were the only demonstrable signs of the disease, also the general symptoms, disappeared promptly after the artificial induction of labor. The urine was free from albumin at all times, and the general symptoms were few, and had the ophthalmoscope not revealed the malignancy of the toxemia, it was probable that labor would not have been interrupted, and it was not unlikely that the patient would have died of eclampsia. Active eliminative treatment gave no relief. Dr. Hirst then induced labor artificially. The general symptoms disappeared at once and the ocular changes after some weeks. A year had elapsed since the termination of the pregnancy. The general condition of the patient was somewhat abnormal, and though there had been no recurrences of the retinal travasations, the retinal vessels appeared unhealthy, being unduly full and tortuous, awaking the suspicion of a disease of their walls. Nothing abnormal had been found in the urine, and the patient's physician was inclined to regard the toxemia as a result of the failure of the liver to perform its

functions properly, the patient's father having died of hepatic cirrhosis, and there having been great tenderness over the whole liver until after the expulsion of the fetus.—*N. Y. Med. Jour.*

Cases of Eclampsia.

At a meeting of the Obstetrical and Gynecological Section of the Royal Society of Medicine on January 9th, Drs. N. C. Carver and J. S. Fairbairn recorded some cases which it was suggested were cases of eclampsia in which death was brought about by hemorrhage into the pons. The symptoms which should arouse suspicion of such hemorrhage during eclampsia were deep coma and cyanosis, with marked respiratory disturbance occurring in a young patient presenting the urinary and other signs of eclampsia, and they were especially suggestive when the attack was unaccompanied by the usual eclamptic convulsions. Mr. A. Lionel Smith said he had seen three cases of cerebral hemorrhage complicating eclampsia or toxemia of pregnancy, in all of which the diagnosis was confirmed at the necropsy. Dr. Amand Routh thought it unwise to increase arterial tension, as must have been done in the first case reported, when 10 oz. of blood were removed, and 40 oz. of saline infusion injected. This might well have increased the tendency to hemorrhage. He presumed that saline infusion in these cases was given to dilute the toxins at each given point, and to increase the leucocytosis to combat the toxins; but it was doubtful if it should be given when it increased arterial pressure. Dr. Fairbairn, in reply, said no attempt had been made to make an exhaustive collection of cases of apoplexy as the cause of death in eclampsia, and the cases collected were those of hemorrhage into the pons or base of the brain without unilateral symptoms to suggest apoplexy. Large cerebral hemorrhages were not frequent in eclampsia, as was shown by the statistics quoted in the paper. The cases recorded were undoubtedly rare, but the possibility of a deeply comatose and cyanosed eclamptic patient having also a cerebral hemorrhage ought not to be lost sight of, especially in giving a prognosis.

An Analysis of 250 Breech Presentations.

Dr. R. L. DeNormandie reports an analysis of 250 breech presentations in the Boston Lying-in Hospital, with the following conclusions (*Surg. Gyn and Obstet.*, Ap. '08):

1. Breeches in primipare are common.
2. Manual extraction occurs in one-half of all breech deliveries.

3. Forceps to the after-coming head is at times a life-saving procedure.

4. Lacerations of the maternal soft parts occasionally are very extensive.

5. Injuries to the child are much more common than in vertex deliveries.

6. Sepsis is no more common in breech than in vertex deliveries.

7. Breech presentations in contracted pelves should have an early Cesarean Section.

8. The fetal heart in breech presentations should be listened to at short intervals after the rupture of the membranes.

9. If the cord prolapses, immediate extraction should be done.

10. A long labor, *per se,* is not an indication for operative interference.

11. Early rupture of the membranes, without advance in the labor, is an indication for immediate operative interference.

It is these last two conclusions upon which I wish to lay especial emphasis. A long labor where the advance is steady, with the membranes intact until a short time before full dilatation, is not an indication for operative interference. I have shown that the deaths in such cases are relatively few; but in marked contrast stand out the cases where the membranes rupture early or before labor starts. When a series of 21 cases with the membranes rupturing early in labor give a mortality of 12, then is it time to see wherein lies the error of our management of the cases.

We are advised in the text-books to leave breeches alone until a positive indication arises, and that indication is usually said to be an alteration in the fetal heart. If we wait until this occurs, then we must of necessity operate on a baby with lowered vitality. It is not the manual extraction *per se* that kills, it is the fact that a hard operative delivery is done on an already partially asphyxiated baby. This series of cases, it seems to me, show that fact clearly; for in the prolapsed cord cases, where manual extraction was done at once, the results were exceptionally good; while where manual extraction was done late, after the membranes were long ruptured, the results were very bad.

It, therefore, seems fair from this series of cases to recast the indications for operative interference in breeches and not to wait until there is an alteration in the fetal heart sounds, but to regard a non-advance or very slow advance of the labor, the positive indication for delivery.

THERAPEUTICS.

Strontium Bromid.

Robinson (W. J.) thus summarizes his paper in the *Journal A. M. A.* on strontium bromids:—

1. The bromids are valuable and sometimes indispensable agents.

2. Potassium bromid is the worst bromid we possess, its undesirable by-effects by far overbalancing its therapeutic value. Whoever administers potassium bromid in large doses for a long time is simply slowly poisoning his patient.

3. Sodium bromid is a much milder bromid, and when chemically pure strontium bromid is not available sodium bromid is the salt of choice.

4. Strontium bromid is the best of all inorganic bromid compounds. It is a positive (a) anaphrodisiac; (b) it is a positive nervous and genitourinary sedative; (c) it does not upset the stomach; (d) it does not produce acne, or if it does produce a few acne pustules they are mild and transient; (e) it often acts as a mild intestinal antiseptic; (f) it does not irritate the kidneys—rather the contrary, and (g) it has a tendency to diminish albumin in albuminuria and sugar in glycosuria.

5. The dose of strontium bromid ranges from 10 to 60 grains three or four times a day. Occasionally it may be given in doses of one or two drams. It is best prescribed dissolved in distilled water with the occasional addition of essence of pepsin, tincture of cardamom, etc.

6. Strontium bromid is incompatible and should not be prescribed with citrates or sulphates, and it is also best to avoid prescribing it with alkaloids.

7. To obtain the good results from strontium the salt must be chemically pure. If contaminated with barium, as the commercial strontium salts not only frequently but usually are, its effects will be disappointing and its untoward by-effects may be more severe than those of potassium bromid.

Paraldehyde. By Dr. A. Wurschmidt.

This was introduced into therapeutics by Cervello in 1882. It is a chemical product of the aldehyde series, and is a polymer of acetic aldehyde. It exists as a colorless liquid, with a peculiarly pungent and oppressive odor. It crystallises at 10° C. It is easily soluble in cold water, but requires 1 in 10 of

warm water. It mixes with alcohol and ether in all proportions. I generally used the following stock mixture:

Paraldehyde, 100 parts.
Aqua font., 1,440 parts.
Syr. simp., 300 parts.
Essent. citro., 10 parts.
Spir. sacc. opt., 150 parts.

This mixture contained 1 gramme of paraldehyde in 20. The dose ranged from 2 to 12 grammes, the average being 5 grammes. Sometimes such small doses as 3-4 grammes sufficed. The drug is given by the mouth.

The best results were achieved in mania, the maniacal exacerbations of dementia præcox, general paralysis, epilepsy and hysteria. Sleep was produced in 85 per cent. of an extensive series of cases; some of these also gave evidence of general improvement. At first the sleep was profound and calm, but as the night advanced irritability was manifested on external disturbances. The sleep was from five to eight hours in duration. No unfavorable by-effects were ever noted. Large doses did not upset digestion; neither were pulse nor respiration affected. One patient complained of an evanescent tinnitus. Patients who had previously taken chloral, or morphia subcutaneously, remarked that in the morning the head felt clearer than when these drugs were used. On one occasion a condition of delirium and apprehension came on when paraldehyde was left off, but these symptoms disappeared when it was resumed in small doses. My later experiences have confirmed my opinion of the efficacy of paraldehyde, and despite its taste and smell I consider it a valuable acquisition to materia medica. I regard a dose of 5 grammes of paraldehyde as superior to 2 grammes of chloral. Unfortunately, the unpleasant exhalation which proceeds from those treated with this drug constitutes a drawback to its employment. An advantage of paraldehyde is that it can be used in circulatory disturbances. It has no analgesic effect.—*Folia Therapeutica.*

PEDIATRICS.

IN CHARGE OF ALLEN BAINES AND W. J. GREIG.

Icterus in Pneumonia

Blumberg, in an article upon croupous pneumonia, with icterus, discusses particularly two phases of the question: (1)

Does the site of the pneumonia influence the onset of icterus? (2) Is there any relation between the severity of the pneumonia and the icterus?

The basis of the discussion is 300 cases, of which 21, *i.e.*, 7 per cent., presented icterus. Twelve of these were right-sided, 8 left-sided, and 1 bilateral. He concludes that the site of the pneumonia has nothing to do with the causation of the icterus.

In regard to the second question, he adopts as the basis of measurement of the intoxication the appearance of albumin in the urine. This is a very poor basis of calculation, for practically all cases of pneumonia show more or less albuminuria. He found that 86 per cent. of the jaundiced cases showed albumin and 88 per cent. of the others. He concludes from this that there is no relation between the severity of the case and the presence of jaundice, but states that the mortality of the 21 icteric cases was 19 per cent., while that of the others was 11.34 per cent., *i.e.*, only a little more than half the mortality shown by the cases of icterus. It is obvious that one cannot draw conclusions from such figures as these, for there are so many factors entering into the mortality of pneumonia, but I am confident that most who have had much to do with pneumonia will not agree with Blumberg, but would unite in saying that the jaundice is an expression of a severe infection.

Slight grades of jaundice may be disregarded, but all cases with well-marked icterus should be gravely regarded, for it not only indicates a grave infection in pneumonia, as in any other septicemic process, but in itself is a source of danger.

It has been repeatedly shown that jaundice, irrespective of its cause, has a deleterious effect upon the heart, causing it to dilate and cause such inco-ordination in the action of the papillary muscles of the heart as to cause leaking of either or both auriculo-ventricular valves. When one recalls the well established fact that in the heart lies the great danger in pneumonia, the existence of a complication, which in itself alone may seriously alter the heart's action, must cause grave anxiety. Even in the exceptional cases, where the jaundice is probably due to gastro-duodenitis, not to hemolysis, it must be considered as a serious thing.

Blumberg's conclusion, that the site of the pneumonia has nothing to do with the causation of true icterus, is quite in accord with that reached by others who have studied the same question. —*Progressive Medicine*, March, 1908.

Editorials.

THE MEETING OF THE ONTARIO MEDICAL ASSOCIATION.

The recent meeting of the Ontario Medical Association, held at Hamilton, May 26-7-8, has been called in sporting terms a superlative record breaker. In considering the whole history of this Association it is found that this meeting excelled in three respects:

1. It was the best meeting from a literary standpoint, that is, as to papers, addresses and discussions.

2. It was the largest meeting the Association has known, there being registered 319. We are glad to be able to state that over 100 of these were from Toronto.

3. The hospitality of the profession of Hamilton towards the visitors was the most generous that has been known at any of the twenty-eight meetings of the Association.

One might naturally ask what was the reason for such superlative success in so many directions? Was it partly chance and luck? There may have been some luck about the matter, but there certainly was no chance. The Hamilton physicians "took no chances." The President and local committees worked harder than any of the Presidents and Local Committees of the former 27 years.

We think that not one of the Past Presidents will object to our making the statement that Ingersol Olmsted's work for this meeting was far ahead of the work which was done by any of the former Presidents of the Association. We need not refer to the details of his work. From hints received from various sources, we have reason to believe that no one man is in a position to fully realize the character and the amount of the work which he accomplished. Let us then be satisfied to announce the general verdict that his work was in all respects magnificent, and was crowned with the success which it richly deserved.

It is impossible for a non-resident of Hamilton to discuss

intelligently the individual work done by the physicians of that city. The outsider soon received the impression, after arriving in Hamilton, that the local profession was working as a single, solid and active unit in keeping the machinery of the meeting going. Everything seemed to be right—nothing went wrong—except the weather. It seemed to warm up and become more enthusiastic as the meeting went on, until the last day when it became altogether *too red hot* for comfort. However, the heat had no appreciable effect on the attendance, and the interest in the proceedings was maintained up to the last minute. Considering the remarkable unanimity displayed it seems almost unfair to mention names, but we believe it is due to Dr. Wallace, Chairman of the Committee on Business and Papers, and Dr. Osborne, Chairman of the Committee on Arrangements, to say that the work of these two men might be considered "a close second," to that of the President.

Congratulations to the profession of Hamilton!

There was a general feeling of regret when it was learned that Dr. Chas. P. Lusk, who has been so acceptable as the General Secretary for so many years, had decided to withdraw this year. He was certainly one of the most careful, able, and courteous officers the Association has known. It was also a matter of regret that Dr. Sam Johnston desired to withdraw from the Secretary's Department. While our thanks go to these two worthy officers we feel certain that they and others will join us in saying that the new appointments of Dr. Stanley Ryerson, of Toronto, and Dr. Heurner Mullin, of Hamilton, as Secretary and Assistant Secretary, respectively, are eminently satisfactory.

There appeared to be a consensus of opinion that Dr. H. J. Hamilton, of Toronto, the First Vice-President of last year, should be promoted to the position of President. We congratulate Dr. Hamilton on his election to a position which we think he richly deserved. Toronto will be the place of meeting for 1909. We can assure both Dr. Hamilton and the profession of Toronto that if they do as well for the next meeting as Dr. Olmsted and the profession of Hamilton did for the last meeting we will all be perfectly satisfied.

OTHER POINTS CONNECTED WITH THE MEETING OF THE ASSOCIATION.

We had intended to add something about the social side of the Meeting and also about the advisability of holding meetings frequently outside of Toronto. Since the above was written, however, we have received an interesting communication from Dr. John Hunter, of Toronto, which deals sensibly with these points, and which we publish with pleasure in this issue.

We may differ to some extent (not greatly, however) from Dr. Hunter, as to the standing of University Professors from Toronto and elsewhere. We think they should neither be placed on a pedestal above nor on a plane below other general practitioners. There seems no reason why they should be excluded from any privileges, offices, etc., in the Association. We believe that they should simply rank on equal terms with their brother physicians from all parts of Ontario.

Apart from these considerations, however, which are not of vast importance, we quite agree with Dr. Hunter that meetings should be held frequently outside of Toronto. In this connection we must consider the wishes of outside cities. We should not ask these cities to assume burdens unless we are certain that they desire to do so. There was no doubt last year as to Hamilton in the minds of the majority, because it was well-known that the President elect and the profession of that city were practically a unit in their desire to have the meeting for 1908.

MEDICAL CONTROVERSIES.

In looking back over the history of the race, medical men are inclined to feel puffed up, when they compare themselves with the clericals of the past, who indulged so freely in the sophistries of theological controversy. Whenever medicine came in contact with the church, it was always to the disadvantage of the former, and we think with pity of the Pope's punishment of Galileo, and of Calvin's wrath visited upon poor Servetus. If, however, we bear in mind that the priest played a larger part in the world's

politics than did the physician, and, therefore, had his faults, as well as his virtues, more emphasized, it will give us a much better perspective. Human nature is always the same, whether a man wears sacredotal robes or a coat of mail, and although it is true, that the medical profession have seldom inflicted the thumb screw and the stake upon those brethren whom they deemed heterodox, yet there are many striking examples of other ways in which they have shown their disapproval.

After Harvey announced his discovery of the circulation of the blood, he was so angered by the discourtesy—to use a mild term—of his confreres, that he at one time resolved to leave London. Even as late as 1850 Semmelweis was driven to the mad-house in the hot controversy that waged about his "heresy" of the cause of puerperal sepsis. In our own day, however, discoveries are so numerous and heterodoxy so common, that we have not time to prepare a fagot for each new offender. And yet we look askance at any one who dares to discover a cure for cancer or who finds a new germ in syphilis or rheumatism. Very often we are right in our doubt, but to-morrow we may make a grievous mistake.

The proper scientific spirit, of course, is one which neither sees an enemy in everything new, nor with a silly optimism seeks ever for "the very latest." At the present time, for example, the serum therapy of epidemic meningitis is on trial. Although many wonderful cures are reported, yet we must remember that in every outbreak many patients recover, when absolutely nothing has been done for them. We must not condemn the anti-serum simply because it is new, nor must we, on the other hand, be too sanguine, lest the treatment meet the same fate that befell Koch's tuberculin. The golden mean in this, as in every other case, will soon put the serum in its proper place.

THE RESEARCH DEFENCE SOCIETY.

A remarkable association has been formed recently in England, which is known as "The Research Defence Society." At

the head of it is one of England's greatest men, Lord Cromer. The list of Vice-Presidents, of whom there are nearly 100, includes some of the most distinguished men in Great Britain. The Hon. Secretary is Stephen Paget, F.R.C.S., who was the chief organizer of the Society.

The objects of the Society are to explain to the public by means of discussions, lectures and pamphlets, the value of experiments on animals to science and medicine. For some years the antivivisectors have bitterly and unjustly attacked scientists who performed experiments on the lower animals. During these years the outrageous statements of the anti-vivisectors have not been properly or definitely answered. It is thought by many that the time has arrived when the public should learn all the facts in connection with such charges. It is important that the public should learn that experiments on animals are performed in the interest of suffering humanity, and that the charges of cruelty in connection with such experiments are false.

The Society will give information to all who wish to examine the arguments in favor of such experiments. It desires the public to know "the truth, the whole truth, and nothing but the truth" as regards vivisection. With this end in view it will publish articles, and send speakers to meetings where the subject is discussed.

We learn from the London correspondent of the New York Medical Journal that several important letters have appeared in the Times, and other daily journals on the subject, including some from laymen, testifying to the interest the Society has raised among the educated classes.

CANADIAN MEDICAL ASSOCIATION.

When one considers the dismal dullness of last year's meeting of the Canadian Medical Association, it is a pleasure to think of the marked contrast found in this year's meeting. The Ottawa meeting was bright, snappy and interesting from start to finish. It is remarkable that two such excellent meetings as those of

Hamilton and Ottawa should have been held in Ontario within so short a space of time. It was feared that the profession of Western Ontario would be unable to give much support to the meeting at the Capital. However, our friends in Ottawa and the surrounding district were equal to the occasion, and under the leadership of Doctors Fred. Montizambert and Bob Powell, worked with a will, and the result was one of the best, and one of the most pleasant meetings Canada has known. In fact, we are probably justified in saying that all the superlatives applied to the meeting in Hamilton are equally applicable to that in Ottawa.

On the first afternoon there was a formal reception to the visitors by the local members at the Ottawa Golf Club, Aylmer. At the first evening session Dr. Montizambert delivered his presidential address. He began by expressing his belief that a new era in the history of the Canadian Medical Association had begun. He then briefly traced the development of scientific medicine from the days of Aesculapius. He divided this period of development into four eras. 1. Hebraic epoch, when special attention was given to domestic sanitation. 2. Roman epoch, the era of municipal sanitation. 3. Gothic epoch, the era of national sanitation. 4. The modern epoch, the era of international sanitation.

He then advocated more adequate protection of the public health, and the diffusion of information regarding preventative measures. He also urged proper inspection of the water supply and plumbing work. He believed the Federal Government, and especially the Bureau of Public Health, should undertake the lead in the struggle against tuberculosis and other contagious diseases; and he finally suggested that the Dominion Government should station medical officers in the emigrating centres of Europe and the Orient.

Sir Wilfrid Laurier then delivered a short address. As a citizen of Ottawa he gave to the Association the warmest welcome of the city. He expressed his personal interest in the work and objects of the Association. He stated that he could not turn a deaf ear to any reference to the duty of the National Govern-

ment. He was glad to listen to any arguments, and was open to conviction.

Mayor Scott then formally welcomed the visiting members of the Association to Ottawa and concluded by inviting the Association to the Carnegie Library, where the hospitality of the city was participated in in the form of light refreshments. This civic reception proved a most pleasant and enjoyable occasion. An orchestra stationed near the refreshment room rendered several selections. A large number of the wives and daughters of members of the Association were present.

On the second afternoon the hospitality of the Canadian Pacific R. R. Co. was extended to the members of the Association and their friends to the number of 300, who were taken by special train to Caledonia Springs, and tendered a luncheon at the large hotel at that resort. The doctors, individually and as a body, gave unstinted praise to the Canadian Pacific officers for this perfect and unique entertainment. This excursion occupied half a day, and a full evening session was held to make up for such loss.

Two very interesting papers were read at this evening session. Dr. Jno. C. Munro, of Boston, took for his subject "The Plea for the Fair Treatment in Medical and Surgical Operations." He expressed the opinion that in many hospitals criminal disregard for the welfare of patients was shown by allowing House Surgeons to undertake major operations. He criticized private hospitals as often carelessly managed, and as maintained simply for the purpose of returning profits on outlay.

Dr. Risien Russell, of London, England, read a very interesting paper on "The Use of Reflexes in Diagnosis." For the benefit of the laity who were present he simplified his explanations so far as possible, and made clear the meaning of the term reflexes. While not in all cases infallible, he stated that frequently the value of the reflexes in differential diagnosis was beyond doubt.

During the three days much good work was done in the various sections. On the third day a number of the members visited

the laboratory at the Experimental Farm. The members were entertained at a very enjoyable Smoking Concert on the third evening; but, unfortunately, a large proportion of the visitors were unable to remain for it.

The next meeting of the Association will be held in Winnipeg. Members of the profession in that city suggested last year that the meeting for 1909 should be held in Winnipeg immediately before or immediately after the meeting of the British Association for the Advancement of Science. Dr. Blanchard of Winnipeg was requested to take the presidency. After his election he telegraphed that he feared he would be unable to undertake the duties. If he adheres to his decision not to accept, the Executive, after consultation with the profession of Winnipeg, will elect a President. Dr. George Elliott, of Toronto, was re-elected Secretary, although he had tendered his resignation. It was not thought advisable, now, to appoint a new Secretary, who would not have the intimate knowledge of the new constitution under which the Association is now working.

The Members of the Executive Committee are: Dr. R. W. Powell, Ottawa; Dr. G. E. Armstrong, Montreal; Dr. W. T. Bradley, Ottawa; Drs. F. A. Lockhart, and James Bell, Montreal; Lieut.-Col. C. James, Ottawa; Dr. A. B. Atherton, Fredericton; Dr. A. T. Shillington, Ottawa; Dr. E. P. LaChapelle, Montreal; Dr. J. C. Mitchell, Brockville, and Drs. J. T. Fotheringham, R. A. Reeve, J. H. Elliott, and C. J. O. Hastings, Toronto.

Muskoka Sanatoria Medical Staff.

W. B. Kendall, M.D., C.M., L.R.C.S., L.R.C.P., Physician-in-Chief of the Muskoka Cottage Sanatorium, has been appointed Physician-in-Chief of both the Cottage Sanatorium and the Muskoka Free Hospital for Consumptives, and C. D. Parfitt, M.D., M.R.C.S., L.R.C.P., Physician-in-Chief of the Free Hospital since its opening in 1902, becomes Resident Consultant of the two Sanatoria, each giving his entire time and effort to these institutions. The medical staff will also include a trained resident Pathologist and two assistant doctors, together with a staff of specially trained nurses.

REPORT OF THE RECENT MEETING OF THE AMERICAN LARYNGOLOGICAL ASSOCIATION.

For the first time in its history, the meeting of the Congress of the American Laryngological Association took place, in May last, upon Canadian soil. It was the occasion of its thirtieth annual gathering, Montreal, the home of the President, being the city chosen, with the Windsor Hotel as the place of meeting.

Although of only thirty years' standing, this association is the oldest of its kind in the world; and being almost exclusively American in its personnel, it was a fitting compliment to the courtesy and worth of its President, Dr. Hubert S. Birkett, to have the meeting occur in his own time-honored city.

The Association honored its President by gathering together its Fellows in the ancient town, and the President honored the Association by the beautiful and lavish hospitality which he and his good wife so bountifully displayed.

The Congress opened on the morning of the 11th of May, in a large hall beautifully decorated with flowers. The first address was one of welcome, by the well-known Dean of the Faculty of Medicine of McGill University, Dr. Roddick. It was extended most cordially to the visiting Fellows and their wives in behalf of the medical profession of the city.

Then followed the President's address; and as this is the Tercentennial year of the founding of Quebec, he chose for his subject, "The Early History of Medicine in the Province of Quebec." The address was an elaborate study, dating back to the folk-lore of Canada's earliest days, full of salient points and valuable details, that could only be gathered from a critical and elaborate examination of the archives of the Province. When published, this carefully prepared paper will, no doubt, be a valuable addition to the literary and scientific records of the country.

The first regular paper presented was entitled, "A Grain of Corn Removed from the Trachia," by Dr. Bryan, of Washington, followed by one on "Personal Experience in the Use of the Broncho-scope, Esophagoscope, and Gastro-scope," by Dr. Halsted (a Canadian), of Syracuse. These papers combinedly created a wide discussion.

A symposium upon "Recurrent Abductor Paralysis brought out exceedingly valuable papers by Dr. Gleetsman, Dr. Dela-

van, and Dr. Riel, of New York, and Dr. Casselberry, of Chicago.

Another series of papers that were grouped together and discussed with interest, were entitled, "Cyst of the Frontal Sinus Connecting with the Frontal Lobe," by Dr. Theisen, of Albany; "Notes upon two unusual cases of Frontal Sinus Disease," by Dr. Price-Brown; and "A Case of Sinusitis, some Cerebral Symptoms Relieved by Operation; Pyemia, Death, Autopsy," by Dr. Coffin, of New York.

Other papers were: "Formation of the Hard Palate," by Dr. Mosher, of Boston, illustrated by numerous wet specimens and plates; "Papillitis Atrophicans Bilateralis Linguae," by Dr. Wagner, of San Francisco; "Sarcoma of Tonsil," by Dr. Rhodes, of Chicago; "Adrenalin in the Causation of Anterioscleroris," by Dr. Hopkins, of Springfield; "Methods of Opening Maxillary Antra," by Dr. Roe, of Rochester; "Abscess of Larynx Following Pneumonia," by Dr. Hardie, of Chicago; "Case of Laryngeal Scleroma," by Dr. Meyer, of New York; "Subglotta Neoplasm," by Dr. Garies, of New York; "Surgical Emergencies Associated with Tubercular Larynx," by Dr. Grayson, of Philadelphia; "Papilloma of Larynx," by Dr. Clark, of Boston; "Essentials of Speech," by Dr. Makuen, of Philadelphia; "Cysts of Epiglottis with Edema and Abscess," by Dr. Swain, of New Haven; "Laryngeal Stereosis in the Adult," by Dr. Simpson, of New York; "Morphology of the Turbinals," by Dr. Ingersoll, of Cleveland; "Hemorrhage Following Quinsy," by Dr. Newcombe, of New York; "Membranous Tertiary Syphilis with Report of Three Cases," by Dr. Kyle, of Philadelphia; "Essentials of Voice Production," by Prof. Mills, of Montreal.

The exhibition of Radiographs was a large and elaborate one. They were excellently displayed by the arrangement of lights placed behind each subject. The pathological exhibit, loaned by Prof. Adami, added much to the interest of one of the best meetings ever held by the Association.

Socially, Dr. and Mrs. Birkett excelled in their efforts to entertain and interest their guests. The exquisite lunch at the Hunt Club, for ladies as well as gentlemen; the beautiful drives through the city; the reception and concert at the Art Galleries, were all elaborate and beautiful things long to be remembered. The Fellows all went away enchanted with the old French city, and delighted with the unobtrusive kindliness so freely and constantly extended toward them by the President of the Association and his amiable wife.

Correspondence.

SPONTANEOUS INVERSION OF THE UTERUS.

Recently I was called hurriedly to a case of labor. On arrival, I found that the child had been born, and that the patient—a primipara, aged 21 years—was obviously suffering from profound shock—a small, rapid, and feeble pulse, sickness, and a cold clammy skin. On examination, I found the child and placenta expelled on the bed, and the entire uterus inverted, protruding as a globular mass. The entire organ was in a state of relaxation, but hemorrhage had not been excessive. My hand placed on the abdomen detected the absence of the round ball of the contracted uterus. I reduced the inversion by grasping the uterus in the hollow of my hand and pushing gently and firmly upwards into its natural position. On making inquiries, I was satisfied that there had been no mismanagement of the third stage of labor, either by traction on the cord, the placenta being still adherent, or by improperly-applied pressure on the fundus. No mechanical cause could be traced, and the occurrence was undoubtedly one of spontaneous inversion. Such an occurrence is, I believe, one of great rarity. It was only observed once in upwards of 190,800 deliveries at the Rotunda Hospital since its foundation in 1745, and not once in 250,000 deliveries in the Vienna Lying-in Hospital, and many practitioners have conducted large midwifery practices for a lifetime without ever having witnessed a case. My patient never recovered from the shock, and died twenty-eight hours after delivery. The case, especially occurring in a primipara, seems sufficiently rare and curious to be worth recording.—*Brit. Med. Jour.*

Stockton-on-Tees. GEORGE HALL, M.A., M.B., Ch.B.

LETTER FROM BERLIN.

The City of Berlin is the most modern of the cities of the world and the cleanest, with well-paved and brilliantly lighted streets, and traffic regulated by polite white-gloved police officials in a manner which strongly suggests a military compliance. The street car service is excellent, the rolling stock good, and the road-bed even, and there is an absence of the disgraceful

overcrowding found in other cities which claim to be the finest in "God's own country." The military system seems to have penetrated all classes, and is to be observed in the small boy, who touches his gold banded hat in respectful salute when opening the hotel door, as well as noted in the numerous clinics for syphilities, where women line up in even order with nates exposed for the hypoderium injection of a thirty days cure during the secondary manifestations.

Police regulations are stringent in Berlin, and passports are advisable, and it is well also for the medical visitor to have with him a knowledge of the German language, which is essential in order to appreciate the demonstrations and lectures. The cost of living is much the same as in New York, London or Vienna.

Three years ago Berlin was popular with Anglo-American physicians, but now the drift is towards Vienna where the work is concentrated and there appears to be more enthusiasm, and where the charges for post-graduate instruction are lower.

The Canadian medical men who are here at present are Dr. McKenty, of Winnipeg. Dr. Herbert Jones, of Hamilton, and Dr. Hutchins. Last year, of the Canadian cities, Montreal alone was represented by Drs. G. E. Armstrong, C. P. Howard and Maxwell Lawrence, who registered at the Anglo-American Medical Association. On invitation I attended a meeting of this Society on Saturday night, held at Restaurant Heidelberg, on Friedrichs Strasse. The lecturer of the evening was Dr. Joly, first Assistant in the University Gynaecological Clinic. The subject was the "Causes of Haemorrhages from the Vagina." It was an able address, well illustrated, with prepared specimens microscopic and gross. During the delivery of the discourse the members of the Association sat around the tables in friendly fashion, smoking or drinking lemonade and reminding one somewhat of the sociable meetings of the late lamented Clinical Society of Toronto. The meetings are held every Saturday night, and are presided over by an American physician, permanently located here—Dr. Jas. Honan, of 78 Lutzon Street.

The Association was organized in 1903, and is similar to the one which has been in existence for many years in Vienna and has for its object the furtherance of the interests of American and British physicians coming to Berlin for study, and to advise them regarding the post-graduate work in the University, clinics, and hospitals, to assist in finding comfortable locations and to render assistance in case of illness.

Private courses, lasting for four weeks, instruction daily, are given in Internal Medicine by Profs. Drs. Michaelis, Bradenburg,

Strauss, Lazarus, and Drs. Klemperer, Jacobson, Mosse and Steyner. The price ranges from forty to seventy-five marks.

There are also several courses on Diseases of the Stomach and Intestines, mostly by assistants, at a cost of from fifty to sixty marks. Other subjects are taught by talented men at about the same price, except in operative surgery and gynaecology and practical obstetrics, when the fee asked is considerable, even as high as three hundred marks. Diseases of the skin and venereal diseases are exceptionally well demonstrated by Dr. Max Joseph, who has a private clinic with a very large out door attendance at No. 8 Johannis Street, open daily from 9 to 11 a.m., and the moderate fee of fifty marks is charged for a month's instruction. Dr. Joseph is not attached to the teaching staff of the University of Berlin, yet he is the most popular teacher on this subject for physicians taking post-graduate work, and his book on Diseases of the Skin is now in its sixth edition. He has a frank and amiable personality and I have to thank him for an unfailing courtesy to me during my all too brief stay in this city.

Berlin, May 19th, 1908. W. H. B. Aikins.

Personals.

Dr. Lorne Robertson, Stratford, returned from Europe June 1st.

Dr. Andrew Gordon, of Toronto, will sail for England July 10th.

Dr. R. A. Stevenson, Toronto, is paying a short visit to England.

Dr. G. Gibb Wishart, of Toronto, returned from his European trip the last week in June.

Dr. James Robertson, of Stratford, sailed from Liverpool on the "Republic," June 20th.

Dr. H. Crawford Scadding, of Toronto, was married June 15th to Miss Margaret E. Ramsay.

Dr. D. A. Sinclair, of Melbourne, has been appointed associate coroner for the County of Middlesex.

Dr. W. Herbert Carveth, son of Dr. George H. Carveth, was married, June 3rd, to Miss Edith Hewson.

Dr. R. E. Rudolf, Toronto, has been appointed Professor of Therapeutics in the University of Toronto.

Dr. H. B. Anderson, of Carlton Street, will remove shortly to N. E. corner of Bloor and Huntley streets.

Dr. Norman K. Macleod (Tor., '03) left Toronto June 15th for Buffalo, where he has commenced to practice.

Dr. W. P. Caven, of Toronto, has recovered from his recent serious illness, which extended over several months, and sailed for England June 27th.

Drs. A. Orr Hastings and M. M. Crawford, of Toronto, left for a three weeks' trip to New York and other Eastern cities, June 1st.

Dr. Ingersol Olmsted, of Hamilton, sailed from New York for Hamburg June 4th. He expects to spend sometime in the hospitals of Germany and Switzerland.

Dr. Jno. B. Murphy, of Chicago, has resigned from Rush Medical College, and has been appointed Professor of Surgery in the North Western University Medical School.

We are indebted to Dr. Charles A. Hodgetts for the editorial on "The Vital Statistics Act," which appeared in the June issue of THE CANADIAN PRACTITIONER AND REVIEW.

Dr. E. Stanley Ryerson, of Toronto, has been appointed Assistant Secretary of the Faculty of Medicine, University of Toronto, in the place of Dr. J. J. McKenzie, resigned.

Dr. McKay's return to the Legislature will be heartily welcomed by his many friends in the Medical profession of Ontario. None ever worked harder than he in the interests of our profession.

Dr. A. Primrose, of Toronto, sailed from Quebec for England, May 30th. After spending a short time in England and Scotland he will go over to the Continent to visit the hospitals of Berlin and Vienna.

Lieut.-Col. J. T. Fotheringham, M.D., of Toronto, will represent the Canadian Army Medical Corps at the Army and Ambulance Section of the British Medical Association at the coming meeting in Sheffield, England.

Dr. E. Treacher Collins, the celebrated oculist of London, England, paid a visit to Toronto after attending the meeting of the American Medical Association in Chicago, June 8th. During his stay in Toronto he was the guest of Dr. J. Orlando Orr.

Drs. James Russell and J. W. Edgar, of Hamilton, sailed from Quebec, June 26th, on the *Empress of Ireland*, with the Ontario bowlers, who expect to play three weeks in England and Wales, three weeks in Scotland, and one week in Ireland.

Dr. W. H. B. Aikins, of Toronto, after remaining for a time in Dresden, went to Carlsbad. After leaving Carlsbad he spent some time in the hospitals of Berlin, visited Bad-Nauheim and other "watering places" in Germany and then went to Paris. At last accounts he expected to reach Toronto early in July. His Berlin letter appears in this issue.

The following physicians were successful in the recent contest for seats in the Ontario Legislature:—Hon. Dr. J. O. Reaume, Windsor; Dr. C. N. Anderson, Leamington; Dr. Thomas T. Smellie, Fort William; Dr. David Jamieson, Durham; Dr. A. W. Nixon, Georgetown; Dr. R. F. Preston, Carleton Place; Dr. E. Jessop, St. Catharines; Hon. Dr. R. A. Pyne, Toronto; Dr. H. J. Lackner, Berlin; Dr. Forbes E. Godfrey, Mimico; Dr. Angus McKay, Ingersoll.

Prince Ito, Japanese Resident-General, presented the Diplomas to the first class of Corean students who graduated in Medicine at the Serance Hospital and Medical Schools, Seoul, Corea, June 4th. In his address he paid a high tribute to the conscientious

labors of Dr. O. R. Avison, Head of the Hospital and Medical School. Dr. Avison graduated from Victoria University in 1887, and practiced in Toronto for a number of years, being for a time a teacher of the Medical Faculty of the University of Toronto.

The Medical Society of London, England, presented the Fothergillian gold medal to Sir A. E. Wright. This medal is awarded triennially to the man who has done exceptionally valuable work in some branch of medicine or surgery. In 1803 the first of these medals was presented to Edward Jenner, the discoverer of vaccination. It is an interesting coincidence that the man who now received this medal for his work on opsonins and vaccines, has done more than any other to extend Jenner's great work.

Dr. George D. Wilson, as the result of his examination in May last, has become a Fellow of the Royal College of Surgeons, England.

Obituary.

JAMES STEVENSON, M.D.

Dr. Stevenson, of Iroquois, died April 30th, aged 73. He graduated M.D. from McGill University in 1859. He was for many years one of the busiest practitioners in Eastern Ontario.

Dr. Wm. Wright, of Montreal, who was for many years Professor of Materia Medica in McGill University, died May 1st, aged 80.

Book Reviews.

GREEN'S ENCYCLOPEDIA AND DICTIONARY OF MEDICINE AND SURGERY. Vol. VII. Nerur-Physiology. William Green & Sons, Edinburgh and London. 1908.

The above is in keeping with the former volumes, both in general arrangement and in the contents. Among the contributors we note with pleasure such men as Burney, Yeo, Risier, Russell, Broadbent, and many others of equal worth. In the earlier pages comprehensive articles on nerves, the nose and its affections, the ovaries and pancreas, are found; that on paralysis covers nearly 70 pages: then follows a well-illustrated monograph on the parasites; pharmacology has also considerable space devoted to it. Finally, the last 100 pages consist of a fully illustrated article on physiology; the diagrams are particularly profuse and clear; the physiology of the tissues and neuro-muscular mechanism only are described in this, the first part of the essay; finally, we note that the opsonins and ophthalmo-reaction have not been neglected.

MEDICAL GYNECOLOGY. By Howard A. Kelly, A.B., M.D., LL.D., F.R.C.S. (Hon. Edin.); Professor of Gynecological Surgery in the Johns Hopkins University, etc., etc. New York and London: D. Appleton & Co. 1908.

It has been with the greatest pleasure that we have read Dr. Kelly's latest work. It fills a much-needed gap in the subject of gynecology, and it is to the general practitioner that we more particularly recommend it.

The book is in style and binding similar to the two volumes on Operative Gynecology already published by the same author; the illustrations are mostly pen and ink drawings from the hands of Brodel and Horn, and are both numerous and comprehensive, numbering over 150.

The earlier chapters embrace methods of examination and the hygiene of infancy and childhood, and are well worthy of perusal; the disorders of menstruation (including extra-uterine pregnancy), diseases of the genital tract and pelvis, sterility, abortion, gonorrhoea, etc., are fully discussed; finally, the relation of functional disease to gynecology, appendicitis in association with pelvic disease, splanch-noptaois and post-operative complications have abundant space allotted to their consideration. The whole book is alive with practical hints, and we cannot too highly recommend it to our readers.

BIER'S HYPEREMIC TREATMENT in Surgery, Medicine, and the Specialties. A Manual of its Practical Application. By Willy Meyer, M.D., Professor of Surgery at the New York Post-Graduates Medical School and Hospital; Attending Surgeon to the German Hospital; Consulting Surgeon to the New York Skin and Cancer Hospital; and Prof. Dr. Victor Schmieden, Assistant to Professor Bier, University of Berlin, Germany. Just issued. Beautiful octavo volume of 209 pages illustrated. Bound in cloth, $3.00 net. W. B. Saunders Company, 925 Walnut St., Philadelphia; London, 9 Henrietta St., Covent Garden. J. A. Carveth & Company, 406 Yonge St., Toronto, Canada.

This book is not a translation, but an entirely new and original work written by Dr. Willy Meyer, the leading exponent of the treatment in this country, and Professor Victor Schmieden, assistant to Professor Bier at Berlin University. With such an authorship, the authoritative and practical presentation of the subject is assured. The Bier method of treating disease by artificial hyperemia has assumed a place of such importance in modern therapeutics that an up-to-date work on the subject has become a necessity. In the first part, the three methods of inducing hyperemia are described and their practical application exhaustively discussed, namely: Obstructive hyperemia by elastic bandage or band; obstructive hyperemia by suction glasses, and hot-air (arterial) hyperemia. In the second part are taken up the details of application in the various acute and chronic infections, as well as in many non-inflammatory diseased conditions, in which the Bier treatment has proved beneficial or gives promise of doing so. Special attention is drawn to the great importance of preserving the function in infectious cases. Besides detailing the use of the Bier hyperemia in general surgery and medicine, the work presents its uses in gynecology and obstetrics, genito-urinary surgery, otology, ophthalmology, rhinology, pharyngology and laryngology, neurology and psychiatry, and dermatology. The large number of original illustrations and the many marginal notes add further to the practical character of the book. The work reflects the latest developments in the use of this method of treatment—a therapeutic discovery of greater importance than any within recent time.

SURGERY: ITS PRINCIPLES AND PRACTICE. In five volumes. By 66 eminent surgeons. Edited by W. W. Keen, M.D., LL.D., Hon. F.R.C.S. (Eng. and Edin.), Emeritus Professor of the Principles of Surgery and of Clinical Surgery, Jefferson Medical College, Philadelphia. Volume III. Octavo of 1,132 pages, with 562 text-illustrations and 10 colored plates. Philadelphia and London: W. B. Saunders Company, 1908. Per volume: Cloth, $7.00 net; half morocco, $8.00 net. Canadian agents: J. A. Carveth & Co., Limited, Toronto.

Volume III. certainly maintains the high standard of this system. The distinguished authors who write here cover the surgery of the head, neck and abdomen most minutely. Mr. Monanihan devotes two chapters to the pancreas and the spleen. In these chapters it is striking to note the great advance that the surgery of these inaccessible and important organs has reached. The distinguished author certainly ranks highest on these subjects, and has reduced the matter to a very small space.

The surgery of the liver is very ably discussed by the Mayo brothers, than whom no surgeons in America have had a wider experience.

Mr. Mayo Robson writes a chapter on the surgery of the stomach. That particular portion of the chapter referring to gastric diagnosis is exceedingly concise and up-to-date. He depends a great deal on the X-ray as a means of defining the outline of the stomach, and there is no doubt about it that this particular method of examination is most important for the diagnosis of stomach displacement and enlargement. When one sees the X-ray picture of the displaced stomach that it was impossible to determine by auscultation and percussion, it must carry conviction that the X-ray has been relegated too largely to unusual conditions and other than routine practice.

It is a practical impossibility to thoroughly review any one volume when that volume comprises so many chapters, each of which is a complete monograph in itself.

There is no chapter in this volume that is not worth the price of the whole work, and it is so thoroughly up-to-date that it should be, and we believe it is, exceedingly popular. The illustrations are largely new and exceedingly good, and the publishers have spared no expense in presenting the work in its most attractive form.

THE FREQUENT, URGENT DESIRE TO URINATE in old men, with some mucus discharge, is relieved by a teaspoonful of sanmetto every three or four hours.

Selections.

The Undesirable Immigrant.

There are many different circumstances arising every day in Montreal which drive home upon our minds the fact that we are getting a great deal of moral and physical riff-raff from Europe. This is not a reflection upon the decent and healthy immigrant, but upon the laxity of rule that allows the "undesirable" to land. With the question of financial fitness we have not to do at present, although we do know a case where an inland bank telegraphed a large amount of money to Quebec to be loaned to immigrants to pass the portal. What we are here concerned with is the question of a medical examination that shall be sufficiently searching to detect advanced tuberculosis, and mental incapacity, and such important disorders. We are in the position of having seen in a few days in Montreal three cases: two of these were far gone in consumption at the time of their landing, and are at the public charge at present. The third is a cripple, of such a great degree of deformity as to be quite unsuited to anything but a life of immobility in a tailor's shop, where he will be certain to end his days at no far-distant time. The country has as good a right to reject such immigrants as has the insurance company to refuse to insure them. This is no question of sentiment, for we yield to no one in our admiration for the cripple who makes a brave fight against his disabilities; but it is a question of who are to be the fathers of the future children of Canada, and if we hope to do our duty by the country it is part of our duty to see that we have as great a freedom as possible from preventible diseases.

It is not beyond our province to say that the medical inspection of immigrants at our ports is not adequate: the steamship and railway companies are eager to pass their passengers on as rapidly as possible, and there seems no possibility of having them kept long enough to allow a thorough examination of them to be made; the solution does not seem to lie upon this side of the water, but upon so rigorous an examination on the other side that such passengers would not be allowed to begin their journey. Upon first cabin steamship passengers this ought not to be obligatory, unless it were plainly evident that an "undesirable"

was paying the extra money to travel among a class to whom he obviously does not belong.

We know that this will cost money, for it will mean the employment of thoroughly capable physicians who will devote adequate time to the work; to undertake such stringent measures will also exclude the chance traveller who comes to Canada "in search of health"; in the case of a consumptive, travelling in Canada is not good treatment, and his lot will be no worse, rather better. If we could keep a hundred consumptives a year out of Canada, such a movement would financially justify itself, if such justification were needed.—*Montreal Medical Journal.*

Summary of a Thousand Cases of Appendicitis.

Crile (*Cleveland Medical Journal,* Vol. VI., No. 8, 1907) holds that an acute abdominal pain and rise in temperature and tenderness, particularly over the appendix, with associated referred pain, are sufficient evidence of the disease to warrant the incision. If in addition there is nausea and vomiting, rising leucocytosis, a history of previous similar attacks, and no evidence of other acute disease, the diagnosis may be considered certain.

Crile roughly groups the atypical cases as follows:

(*a*) Acute infection of the appendix with minimum local but maximum systemic manifestations, early complicated by bacteremia. In these cases there are usually early and perhaps repeated chills, high temperature, early delirium, rapid pulse, negative abdomen, positive blood culture, and usually death from bacteremia. In some of these cases the rôle of the appendix is discovered only at autopsy, and in others the diagnosis is reached only by inference and exclusion. These cases are compared by Crile to bacteremia arising from infection of the tonsils.

The importance of correct diagnosis in such cases is incident to the fact that in them operation should be avoided, since surgical infection reduces the natural resistance of the patient and hence lessens his chances of recovery. Maximum constitutional with minimum local symptoms foreshadow a fatal termination.

(*b*) Appendicitis appearing in the course of other diseases or local disturbances. The greatest number in this group occur in the course of gastroenteritis—the latter in children usually incident to obvious great error in diet. Vomiting, diarrhea, and intestinal pains are typical, but after a few days the peritoneal, in

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Original Communications.

STENOSIS OF THE PYLORUS IN INFANCY—A SURGICAL EMERGENCY—A REPORT OF FOUR CASES OPERATED UPON, WITH RECOVERY.*

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You are probably familiar with the beginnings of our knowledge of stenosis of the pylorus in infancy. The isolated cases of Beardsley, Williamson, and Dawoski, are classics. These were the sole recorded cases for the one hundred years previous to 1888. A knowledge of this disease, as in so many other *acute* affections, came first through post-mortem examinations. All of our knowledge of stenosis of the pylorus in infancy previous to 1898 was derived from autopsy records. The first operation for the relief of infantile pyloric stenosis was done in 1898. Since this time the information derived at the operating table has been added to the knowledge acquired previous to this date from autopsy alone.

In 1905, assisted by Quinby, I made a careful analysis and study of the 115 cases recorded in medical literature up to that time. Many interesting facts were developed by that study. Of these 115 cases 55 were records of post-mortem examinations and 60 were reports of operated cases. Up to 1908 there have been 135 cases operated upon.† Only three cases have been autopsied in France, and but five have been operated upon. Between 1898, when the first operative procedure was instituted, and 1905, a period of seven years, 60 operations were done. Between 1905 and 1908, a period of but two years, 75 operations were done for this lesion. The very great increase in the number of

*Read at the Annual Meeting of the Ontario Medical Association, Hamilton, Ontario, May 27, 1908.

†Dufour and Fredet, Revue de Chirurgie, Feb. 10, 1908.

operations suggests that the disease is being recognized more readily, and that it exists far more commonly than has been supposed. In those communities where it has been diagnosed the number of cases is continually increasing. During the period from 1898 to 1905 eight or nine operations were done each year, while during the two years preceding 1908 75 operations were done, or about 38 each year. This represents an enormous increase in cases coming to operation.

The reports of the most complete and recent autopsy findings confirm the earlier post mortem records. The findings post-mortem are almost always uniform, namely, a pyloric tumor of about the size of the end of the thumb, one inch by three-quarters of an inch. The size of the tumor, of course, varies somewhat, but within very narrow limits. Adhesions have never been found about the tumor. Certainly this suggests that no inflammatory or primarily ulcerative process has been associated with the formation of the tumor. The tumor is oval in shape; its surface is smooth; it is firm, almost hard, resembling cartilage. The situation of the tumor is constant, at the pylorus. In the adult it is ordinarily somewhat difficult to determine the exact situation of the pylorus; necessarily in the infant this difficulty is increased. That William Mayo should have recently described a method for recognizing anatomically the adult pylorus suggests the difficulty of detecting it. In each and all of these cases of infantile stenosis there has never been any difficulty in locating the situation of the tumor at the pyloric end of the stomach. The normal pylorus may be difficult of recognition. The pylorus of the baby with a stenosis is *never* difficult to locate.

Normally the pylorus, like the intestine, has two layers of muscle fibre in its wall, an inner layer of circular fibres and an outer layer of longitudinal fibres. The microscopic examination of this pyloric tumor finds always present a hyperplasia of the circular muscular fibres. The longitudinal fibres are almost never changed.

Normally the mucous membrane lies in longitudinal folds in the pyloric portion of the stomach. These longitudinal folds are found enormously hypertrophied. The significance of these hypertrophied longitudinal mucous membrane folds lies in three facts—(1) that they may serve as plugs to the lumen of the

pylorus, and thus occasion obstruction, and (2) at operation these hypertrophied folds may readily lie in the way of nice suture should pyloroplasty be attempted, and (3) they may easily be damaged if an attempt at the Loreta operation is made. Damage to these folds of mucosa might cause ulceration leading later to stricture of the pylorus. Occasionally there has been described a fibrous hyperplasia of the submucosa.

Careful measurements have been made of the varying thicknesses of the several layers of the pylorus, and in every instance the circular muscular fibre has been found increased in thickness. Measurements have been made also of the pyloric lumen to determine, at least for the pathologist, a standard of size for this lumen. It is an interesting fact in this connection that the degree of the stenosis is in no way proportioned to the degree of the hypertrophy. In all cases measurements have been made in the presence of the tumor, and narrowing of the lumen has been determined.

There are certain secondary changes present in the stomach which are of interest. Muscular hypertrophy of the wall of the pyloric segment has been described. In certain cases of long duration a dilatation of the stomach wall has been found. In all of my personal cases the hypertrophy was present, the process not having gone on to dilatation. The stomach is larger than normal. The œsophagus is found dilated, caused by the back pressure from the stenosis. The intestine is collapsed and empty. There is little or no evidence of a catarrhal process in the mucous membrane of the stomach. At operation the surgeon finds the pyloric tumor and sees the secondary changes in the stomach and the collapsed intestine. The biopsy confirms the findings of the necropsy.

Fortunately, in those cases which have come to autopsy and to operation, the clinical story is known in whole or in part. You are doubtless familiar with this story. It cannot be repeated too often. It should be indelibly fixed on the mind of the medical man, whether he be internist or surgeon. This is the picture, viz.:

An apparently perfectly healthy child is born; it is breast-fed; upon the third or fourth day it vomits. There is perhaps noticed a little lack of appetite. The child does not nurse as vigorously as he should. The lack of appetite is often overlooked. Upon the third or fourth day after birth the mother's breast milk appears in quantity. This may be the occasion for the vomiting of the baby having an obstruction at the pylorus. In some 52 cases of pyloric stenosis the average time of the

appearance of the vomiting was the 17th day of life. The vomiting is not the simple overflow of the full stomach seen so commonly in little babies; it is forcible, expulsive, persistent, obstructive. It is not dependent apparently upon the quality of the food, for variations in diet apparently have little effect. The quantity of the food, however, does have some effect. The baby vomits after a feeding, but he may keep down two or more feedings, and then vomit the total feeding. The amount vomited corresponds pretty accurately with the whole amount taken. The child is in some pain after feeding, but is relieved immediately upon vomiting. There are no evidences of nausea. The material vomited is usually the ingested milk. It seldom or never contains bile. In one case recorded in which bile was present the operation was postponed, the surgeon thinking that if bile appeared in the vomitus the pylorus must be patent, and that therefore food would go through. This child died without operation. Hydrochloric acid is rarely increased in amount. There is usually no hyperacidity. There is no blood in the vomited material. Lactic acid is absent. No catarrhal gastritis is present, certainly in the early stages. Constipation is present; little or nothing passes through the pylorus into the duodenum, consequently there is little residue to be passed as a movement. The dejections are meconium-like, consisting of epithelial debris, intestinal secretions, altered bile, and blood. These meconium-like dejections are very significant. The tongue is clean and moist. The breath is natural and sweet. The child temporarily is hungry and ravenous. There is progressive loss in weight; the child being starved wastes away. One instance is recorded of a pyloric stenosis in a plump, fat child. The attending physician was deceived by the plumpness of the child, operation was postponed, and the child died. The temperature is usually sub-normal, the pulse is small and weak. At the beginning visible stomach peristalsis is noticed as a wave passing from the left to the right. This peristaltic wave passing over the stomach is best seen by placing the child uncovered in a good light immediately after feeding. At a later stage of the disease, when the stomach is very much dilated and has lost its tone, this peristaltic wave is less noticeable and not so readily detected. The epigastrium may be considerably distended by the large stomach. Below the umbilicus the abdomen is sunken and depressed, containing the collapsed intestine. In a large proportion of the cases the pyloric tumor is felt. This tumor may easily be concealed by the large liver of the baby, and it may be mistaken for an enlarged gland. It is most readily felt

one-half inch to the right and three-quarters of an inch above the umbilicus. If the abdomen is looked at after a feeding and palpated as the peristaltic wave reaches the pyloric end of the stomach the pyloric tumor will be most readily detected. Palpation laterally is often helpful as suggested by Carpenter. Such is the story of this unique pathology. The very characteristic vomiting, the peristaltic wave, the pyloric tumor, the dilated stomach, a tetrad of symptoms occurring in an apparently healthy baby with a clean tongue and sweet breath whose bowels are constipated.

Diagnosis.—The typical picture is as described above. There are many variations from this type. Stasis may be complete, as in cases of atresia, or incomplete, or even more complete than that pictured above.

In studying these cases it is important to keep in mind this typical picture of the disease for the difficulty in diagnosis arises with those cases simulating a general stenosis of the pylorus. Those cases which simulate stenosis are the so-called cases of persistent dyspepsia, infantile indigestion. Infantile cases of functional gastric disturbance, with symptoms suggesting pyloric stenosis, are very common. In these doubtful cases the vomiting will be less regular; it may cease for long periods; it will not be so expulsive; it will be more a regurgitation; the stools will be green and slimy; there may be constipation; there may be diarrhœa; the atrophy, the wasting will be slow; there will be no pyloric tumor. These doubtful cases are spoken of by some writers as instances of pyloric spasm. I agree with Cautley that spasm is an assumption on the part of the medical man to explain symptoms. It is an assumed etiological factor. Probably no hypertrophy was ever caused by spasm, although spasm may explain recurrent vomiting. I think the simplest classification of these cases is into two groups, cases of difficult feeding and of true pyloric stenosis. Cases of pyloric stenosis are almost always instances of partial stenosis. There are certain medical extremists who continually strive to antagonize medical and surgical therapeutics. They try to accomplish blindly what surgery attempts to face openly. They would employ electrolysis for stricture of the urethra. They invoke muscle spasm to explain mechanical conditions, then seek to overcome the muscle spasm by small doses of opium. They urgently advocate treatment for secondary indigestion rather than the removal of the immediate cause of the indigestion, the pyloric obstruction. Babies with stenosis of the pyloris are *not* suffering ordinarily from dyspepsia or indigestion, but from

an obstructive lesion. Medicine cannot cure an obstructive lesion. Surgical therapeutics alone can relieve an obstructive stenosis of the pylorus. To distinguish the ordinary indigestion from the acquired dyspepsia due to, and occasioned by, a congenital pyloric stenosis is, of course, often most difficult.

Prognosis. The prognosis is apparently hopeless, at least very grave, in cases treated medically. No case is on record which has received medical treatment and has recovered in which it has been proved that the disease existed. One case only, that of Batten, was treated medically, and, dying subsequently of some other lesion, was found to have a suggestion of stenosis. Many cases are treated medically, and come to operation, and the disease is found. These facts are most significant. Those who like Heubner of Berlin, and a few other, believe that all cases should be treated by medical means, have not seen the true pyloric tumor cases. Heubner's facts are unsatisfactory. He probably has seen cases of difficult feeding, but not the cases of true pyloric tumor.

The case reported recently by Morse*, Murphy, and Wolbach, the specimen from which I will show you later, is unique in medical annals, and most significant. It is the only instance in which an autopsy has been secured so long a time following operation upon a case of pyloric infantile stenosis. It was briefly this: The diagnosis of pyloric tumor was made. At operation the tumor was found. A posterior gastroenterostomy was done, and the child recovered, gaining in flesh and strength, and developed for seven months as a normal child; the child then died of no disturbance which could be associated with the stomachic lesion. At autopsy the pyloric tumor was found unchanged, appearing as it was at operation seven months previously. The stoma between the stomach and the intestine was found intact. This is a most unique and remarkable picture. It means that, despite the proper short circuiting of the obstruction at the pylorus the pyloric tumor remained unchanged for seven months. It is suggested by this case that probably medical treatment with drugs is unable to effect any material change in the character of the pyloric tumor.

The *mortality* following operation is bound to be always rather high, for the operation is done upon a weak child, and the situation is that of an emergency. In the series of 60 operations studied by Scudder and Quinby in 1905, the mortality from all operations was found to be 46.6 per cent.; in the 135 operations up to 1908 the mortality is found to be 48.8 per cent.

* Boston Medical and Surgical Journal, 1908, clviii., 480.

The estimated medical mortality of these cases of pyloric tumor is between 80 and 90 per cent.

Treatment. If the diagnosis is made of a pyloric tumor causing obstruction, whether partial or complete, operation should be done immediately. If the tumor is felt operation should be done immediately. If the clinical picture is suggestive and is wanting only in the presence of the palpable tumor operation should be done, provided the baby is losing under skilled feeding. An exploratory operation in doubtful cases that are not doing well may be wise. Two objects are attempted by operation. First, the overcoming the obstruction to meet the emergency of starvation, and, second, the restoration by operation of the intestinal canal, so that it will serve the individual during the remainder of his life.

There are three chosen methods of procedure. First, the Loreta operation. In this the stomach is opened and the pylorus is stretched by the introduction into it of a pair of forceps. This procedure has met, apparently, with success in a certain number of cases. I believe that it is a dangerous and unsatisfactory method. *Dangerous* for two reasons: First, the peritoneum may be ruptured in an inaccessible part, where suture will be impossible. Second, damage to the pyloric mucosa may lead to subsequent ulceration and stricture. *Unsatisfactory,* because certain recurring cases have demanded a second operation.

The method of pyloroplasty. This is the operation done most in England. It consists in an incision from the stomach into the duodenum across the pyloric tumor, and the suturing this incision so as to increase the lumen of the pylorus.

I believe that this operation is unsatisfactory, because the parts operated upon are stiff and rigid and not mechanically adapted to the procedure. Moreover, the lumen is not immediately restored, but only after 24 or 48 hours.

The third method I believe to be the most satisfactory—the posterior gastroenterostomy. This is the best method.

The Operation of Posterior Gastroenterostomy.

The Anatomy is so tiny that small instruments are to be used.

Before Operation. These little babies will be helped to withstand the shock of operation by an enema of brandy and salt solution. If possible this should be given several times during the twenty-four hours previous to operation. The stomach should be emptied by catheter, even though the baby may have recently vomited. No antiseptics should be used on the baby's skin. The abdomen should be prepared with soap and water,

applied with a soft piece of gauze; the skin may be washed with alcohol, 70 per cent. If the umbilical cord is not separated or has not healed special precautions will be required to effectively protect the skin from the suppurating area. This is best accomplished by a cocoon of collodion and cotton, which should completely cover the stem of the umbilical cord. The baby's arms, chest, and legs should be separately covered with sheet wadding held in place by bandages. Warm water bags or bottles should be placed at the baby's feet and sides. All instruments, solutions, assistants, sponges, and sutures should be ready before the anæsthesia is given in order that the baby may be kept under the anæsthetic as short a time as possible. Little babies take ether well. Complete anæsthesia is necessary, but as soon as it is secured a light anæsthesia may be maintained satisfactorily.

The incision should be in the median line about three or four inches in length, to the left of the umbilicus. After palpating the pyloric tumor a complete posterior gastroenterostomy should be done. Only the necessary gentle manipulation of the gut should be made. The mesocolon in these little wasted infants contains no fat and is transparent.

The method of anastamosis should be that followed in adult surgery, namely, the Mayo operation, of no loop at the lowest part of the stomach and opposite to the perpendicular lesser curvature in the pyloric portion. Fine linen should be used in the outer suture, fine chromic gut in the inner suture. Clamps should be used to ensure cleanliness and hemostasis. After the anastamosis has been made the parts should be returned to their natural position, with the bowel to the left of the spine. The abdominal wall should be sutured in layers, peritoneum, muscular layer, and skin; there will thus be no cutting of sutures or hernia. In placing sutures the vascular and prominent suspensory ligament of the liver should be avoided. The dressing should be held in place by a bandage and not by a swathe; there will thus be no slipping of the dressing.

Immediately after the operation salt solution and brandy may be needed. The child should be placed in the semi-sitting position.

Great difficulty may be experienced in the early post-operative feeding of these little starved babies.

Feeding. It will be wise at first to tentatively feed the baby. Water, whey, mother's milk should be given in small quantities of half a teaspoonful at a time. The quantity may be gradually increased until after a comparatively few days the baby is taking a half-ounce every three hours. Breast milk is the best food.

Haemorrhage. Occasionally there is bleeding from the abdominal wound; even though it be slight it may be of considerable importance. Little babies stand hæmorrhage poorly. A suture may be placed so as to control this hæmorrhage. I have had one experience with hæmorrhage, in which, after the third day, a deep suture served to control it.

Vomiting. Vomiting will occur after operation occasionally for perhaps six or eight days, the vomiting being but once or twice a day perhaps. or three or four times a day, variable in time and amount and gradually subsiding.

Hernia. In the cases here recorded there have been no herniæ. With the abdomen closed by layer suture hernia is unlikely.

I wish to record here the following cases from my own experience with congenital stenosis of the pylorus:

**Case No.* 1. A boy baby artificially fed vomited from shortly after birth, lost in weight and strength. Operation was done when 14 days old. At present 3 years old, weight over 33 pounds; in perfect health. This happens to be the youngest recorded case recovering after operation.

***Case No.* 2.—A boy baby, breast fed, vomited soon after birth; lost in weight and strength. Operation was done when 24 days old. At present he is 2 years 10 months old and in perfect health.

Case No. 3.—Patient of Drs. Morse and Day. Reported here for the first time. A boy baby, began to vomit when 16 days old. This baby was breast fed. Operation was done on the 22nd day after birth. At present the child is 1 year and 7 months old, and is perfectly well.

Case No. 4.—Patient of Dr. C. P. Putnam. Reported here for the first time. A boy baby, began to vomit when 14 days old. A breast fed and artificially fed baby. When 25 days old operation was done. At present he is 6 months old and in perfect health.

Case No. 5.—Reported here for the first time. A baby about three weeks old, who was evidently not going to live but a few hours, so operative treatment was refused. At a subsequent autopsy the stomach and duodenum were obtained. The pylorus presented a characteristic tumor.

Case No. 6.—A patient of Dr. Morse. Reported here for the first time. A baby 7 days old, who vomited on the 3rd day, and because of the persistence of the vomiting and the rapid failing of the child was operated upon when 7 days old. The operation discovered no pyloric tumor nor any pathological

* Boston Medical Surgical Journal, Dec. 14, 1905.
** Boston Medical Surgical Journal, Feb. 22, 1906.

lesion of the stomach. Recovery from the operation was uneventful. The child was most difficult to feed for a time subsequently, but now, a year and three months after the operation, the child is well.

Sufficient time has now elapsed since operative treatment was instituted for pyloric infantile stenosis, so that a few results some years after operation are known.

These cases which I have just related were operated upon three years, two years and ten months, one year and seven months, and six months ago, respectively.

All these cases are well and strong, and apparently healthy children.

Gastroenterostomy in adults was undertaken originally in order to overcome an obstruction at the pylorus. Observations of Katenstein and Joslin and others make it probable that the gastroenterostomy causes certain definite changes to take place in digestion. These facts are interesting in connection with gastroenterostomy in little babies. These cases of gastroenterostomy in infancy serve as experiments in metabolism, and whereas I know of no careful chemical analyses of ingesta and egesta, yet the good health and apparent good nutrition of these babies subsequent to the operation would lead one to suppose that nutrition is not impaired, but that it remains good. These cases of gastroenterostomy following pyloric stenosis in infancy stand therefore as evidence for the opinion that gastroenterostomy is not harmful, but that it has secured for these individuals not only a tiding over of the threatened starvation, but has actually been no impediment or hindrance to good nutrition.

These surgical experiments upon the practically healthy living child are final, despite laboratory findings.

THE SERUM TREATMENT OF CEREBROSPINAL MENINGITIS.

By Allen M. Baines, M.D., C.M.,
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The successful treatment of this dread disease has aroused more enthusiasm in the medical world than any other discovery, for so we may term it, that has been published, discussed and endorsed since that boon to the public, the antitoxin of diphtheria. To Dr. Simon Flexner of the Rockefeller Institute, New York, is due the gratitude of the medical profession and general public for introducing the antimeningitis serum.

Last year Dr. Flexner developed an animal serum, with which he treated monkeys afflicted with this disease. It was found curative, and in no case harmful. Further experimentation in human beings gave the same gratifying results. At the annual meeting of the Pediatric Society, held at Delaware Watergap, in May, the main topic of discussion was Dr. Flexner's paper, in which he reported results obtained from over three hundred patients coming from one end of the States to the other, and also a large number from Belfast, Ireland, and Edinburgh. In an editorial in the *Archives of Pediatrics,* from which we quote, Dr. Flexner states that the mode of action of the serum is mildly antitoxic and decidedly bacteriolytic, the serum having the effect of promoting the development of the meningicocci, and bringing about their disintegration. On account of this property of the serum, it must necessarily be brought into contact with the germs in a fair degree of concentration, and, therefore, it must be injected into the cerebro spinal canal after the cerebrospinal fluid has been withdrawn. It has little or no effect when injected elsewhere.

In the first place the serum is harmless. It has never been followed by injurious results. Secondly, it has produced a decided reduction in the mortality of the disease. The usual mortality in this disease is about 80 per cent. In cases treated by the serum the mortality is but 30 per cent., or under. This is a great contrast, for in the New York epidemic of 1904 there were 2,350 cases, with a mortality of over 75 per cent. Infants under one year all died. In Belfast, during the epidemic of this year, the general mortality of those treated outside hospitals and without serum was 80 per cent.; those treated by the serum in the hospital, under 26 per cent. In Akron, Ohio, there were nine cases treated without serum, one recovery; twelve cases with serum,

nine recoveries. In fourteen cases of infants under one year treated by serum nine recovered.

The most striking phenomena following the use of the serum is the amelioration of many symptoms. The temperature drops either suddenly or gradually, a crisis occurring commonly within 48 hours. With the subsidence of fever comes improvement of other symptoms. A cessation of pain and hyperaesthesia, clearing of the mental condition, the comatose state giving way to improved intelligence, and once more the child is interested in the surroundings, and takes food. Retraction of the head and Kernig's sign are the last to yield, some days after disappearance of all other signs. The whole course of the disease is much shortened, to a week or ten days in many instances. This shows a mighty contrast to its usual course of five to eight weeks in cases recovering without serum treatment. The laboratory showings are of extreme interest. The fluid can be tested microscopically, and important changes marked, after the use of the serum. Following the first injection, there is observed a lessening in the number of the meningicocci in the fluid outside the cells. After successive injections a lessening of these inside the cells, the organisms become swollen, indistinct, and, moreover, refuse to grow in cultures. Finally they disappear altogether, and the amount of fluid becomes rapidly less. This effect on the organisms, since it can be definitely followed from day to day, furnishes objective proof of the efficiency of the serum, and this evidence can be proven in the laboratory by a disinterested investigator, thus obviating personal enthusiasm of the clinician. The consensus of opinion of the members of the Pediatric Society was as follows: In every case of cerebrospinal meningitis lumbar puncture should be done at once. If the fluid thus obtained be turbid, from 20 to 30 c.c. of the antimeningitis serum should at once be injected into the spinal canal, without waiting for a bacteriological report of the extracted fluid. Turbid or purulent fluid usually shows the germ. Should it show pyogenic organisms or pneumococci, no harm will have been done. The injection should be repeated daily for three or four days, or until symptoms are improved. It is significant that the more recent reports of the use of the serum show better results than the earlier reports, which seems to point to the fact that experience as to procedure, dose, time, etc., is bringing about better results. The earlier the condition is diagnosed and treated, the quicker and better are the results. The blood count is also of great interest. In many cases, at the outset, the leucocytes show 30,000, but within four or five days fall to 12,000, with an increase of polynuclear leucocytes.

Heiman, of Mount Sinai Hospital, writes concerning the method of performing lumbar puncture and introduction of the serum as follows: "Since Quinckes' publication in 1891 on lumbar puncture this procedure has become firmly established as an indispensable therapeutic and diagnostic measure, and has done more to place meningitis on a scientific basis than any other modern procedure. On account of its great importance, I shall give a somewhat detailed description of the proper method of performing this minor operation. We aim to obtain the spinal fluid by entering the subarachnoid space below the point where the spinal cord proper terminates, so as to avoid any injury to this important organ. It has been found, even in infants, that the cord does not extend below the second lumbar vertebrae, although the subarachnoid cul-de-sac extends below the fourth interspace. This fact gives us the selection of the proper site of puncture in infants, which should be the fourth lumbar interspace, that is, on a level of the highest points of the crests of the ilia. The patient should be placed on the left side in the horizontal position at the edge of the bed or operating table. An assistant should hold the patient by gently grasping the neck and legs, and, by exerting moderate anterior flexion of the spine, separate the spinous processes, thus facilitating the introduction of the needle. I prefer the use of the original Quincke needle, to which I have added a movable flange-like guard. This, set at the proper distance, *i.e.*, 2 to 4 c.m., in children, 4 to 7 c.m. in adults, just previous to the puncture, prevents the needle from puncturing too deeply, and thus avoids injury of the anterior venous plexas. It also helps to steady the needle after its introduction.

"The skin at the side of the puncture having been surgically prepared, and wet bichloride towels spread on the table and floor, the operator inserts the needle at an agle of 10 degrees to the axis of the spine, in the median line in children, 5 to 10 mm. to the right in adults. When the needle is in the proper place the stilette is removed and the conus inserted into the hilt of the needle, thus connecting the latter with the manometer, by means of the tubing. The hydrostatic pressure is then measured. The fluid is allowed to flow into sterile test tubes by lowering the manometer. The withdrawal of fluid should cease when the hydrostatic pressure is 3 to 5 c.m., which is the normal pressure.

"Thus far, simply puncture, measurements of pressure, and withdrawal of fluid have been described, without withdrawing the needle. From 20 to 30 c.c. of the warmed serum is placed in a serum syringe, or in a pointed test tube or ear syringe, the

manometer removed, and the fluid slowly injected; or, if the test tube be used, by elevating, its gravity will carry the serum into the canal.

"The procedure is to be repeated daily, or at least every second day, until the temperature falls, and the general symptoms have improved. Meantime the effect upon the cerebrospinal fluid is carefully studied."

228 Bloor Street West, Toronto.

(Note.—Any physician who has an acute case of cerebrospinal meningitis may obtain the serum free of charge on application to the Hospital for Sick Children, Toronto. This offer holds good until the serum given by Dr. Flexner to Dr. Baines is exhausted.)

THE WATERS OF VICHY.

By Felix Fau, M.D.

Among the old watering-places of France, Vichy is certainly the best known and the most frequented. The season opens on the 1st of May and lasts until late in the fall, during which time there are about 100.000 visitors from all sections of the world, and, having undergone the "cure,' affirm their belief in the beneficial effects derived from the natural waters, which are to be had at the present day in all the markets of the world. Experience during centuries has confirmed the usefulness of mineral waters in the treatment of many maladies and their salutary influence in a great number of chronic affections.

According to Pliny, the ancients believed that a tutular divinity and a friend of man presided as guardian over every source of mineral water, reminding us of the lustral and magic waters, which were the last refuge of the sick and of the physicians; so that Alibert, in 1815, wrote: "Nature has everywhere given in profusion mineral waters for the happiness and preservation of the human race."

Mineral waters, although being a precious resource of the healing art, are not infallible in every case, but they may console those who use them and arrest for a time the progress of chronic diseases. Let me quote from that immoral observer, Areteus, "All sick persons cannot be healed; if so, the power of physicians would surpass that of the gods: it is a great deal if the physician succeeds in softening the sufferings and ameliorating the progress of the maladies."

Modern medicine and chemical analysis have made rapid progress, and the natural mineral waters from the Bassin de Vichy are still more freely prescribed than ever by leading physicians, and the chemical analysis remains the same. Some are of high temperature and saturated with potassium, sodium and various salts, while others are fresh, sparkling and agreeable, containing considerable carbonic acid, iron and lithium. All these have their uses, but physicians skilled in the knowledge of the waters are the indispensable mediums for directing the patients in the proper and safe course of treatment.

The scientist requires technical knowledge and must be thoroughly conversant with the waters found in the Bassin de Vichy. When the season opens a number of renowned physicians occupy themselves in consultation work at this noted resort.

Speaking the English language, I have fortunately among the visitors from Canada and the United States many clients, and I am frequently asked the question, what is the best water in Vichy? To answer this question in a satisfactory manner requires considerable experience of the effects of the waters of Vichy in cases of stomach trouble, liver complaints, hepatic colic, dyspepsia, diabetes, rheumatism, and other affections. Leaving aside the hot mineral waters, which do not bear exportation, and considering only those from the cooler sources which are of particular interest to those living outside Vichy, I may say that my attention has been concentrated especially on the spring which has been so highly celebrated, the "Source Andreau." Deep study in this has allowed me to verify the analysis that it contains a considerable amount of mineral components, such as, arseniate of soda, bicarbonate of magnesium and calcium, protoxide of iron, chloride of strontium, phosphate of soda, and free carbonic acid. The Andreau Spring gushes in Cusset, two miles from the centre of Vichy, in a large park, where the circumstances are favorable for the careful bottling of the water for exportation, and under the most up-to-date hygienic management. It is not decanted or canalized, but bottled directly at the Source at a temperature of 55 degrees Fahrenheit, which fact insures the perfect conservation of its natural properties.

I was encouraged in the use of this water owing to the exceedingly favorable experience of some of my eminent colleagues, and especially of Dr. Chevreux, of Vichy, and my ten years' experience has been such as to cause me to affirm that I have found it to be the standard water of the Bassin de Vichy.

It has been mentioned—right or wrong—by many men that by the too liberal use of the Vichy waters they tend to weaken the system. This report does not hold good, however, to the Andreau water, as it contains a considerable proportion of iron and lithium, which tends to strengthen and rejuvenate those who partake of it. I have used Andreau water in severe cases of hepatic colic, nervousness, urinary troubles, neuralgia, anemia and rheumatism.

I shall not further trespass on your space or go beyond the limit imposed in these lines: "Scribitur ad narrandum non ad probandum." I shall be glad, however, if I have said anything to interest my esteemed colleagues of Canada, as those whom I have met are in sympathetic accord.

Vichy, April 28, 1908.

PRESIDENT'S ADDRESS, ONTARIO MEDICAL ASSOCIATION.

By Ingersoll Olmsted, M.D., Hamilton.

Gentlemen,—Permit me first to thank you for placing me in the honorable position of President of the Ontario Medical Association. In electing a member of the profession of this city to fill this most important office, I feel that you wished to do honor to Hamilton and to the profession here, rather than to the individual. On two previous occasions Hamilton has been honored by the election of one of its citizens to the Presidency of this Association. In 1883 the late Dr. J. D. Macdonald was chosen, and again in 1888 the late Dr. J. W. Rosebrugh received the honor. The first and only meeting of this Association in this city was held in the old City Hall on James Street North, where the present City Hall stands, in the year 1884, just twenty-four years ago.

After an absence of twenty-four years, it is my pleasant duty to extend to you a hearty welcome. We feel that the prodigal has returned, and an intellectual feast has been prepared for you. We trust that the reception given you this year will induce you to return to us in the near future.

Hamilton has well deserved the name of the Ambitious City. It may not be generally known, but nevertheless a fact, that this was the first city in America where antiseptic surgery was practised. Dr. A. E. Malloch, a Canadian, who is with us this afternoon, was a house surgeon of Lord Lister. He returned to Canada and introduced Listerism in Hamilton in 1868.

In his early operations the spray was used, but realizing that it was unnecessary, he abandoned its use years before it was discarded in England. The results he obtained, and the work he did were as fine as anything I have ever seen.

Also this is the first city in the province where compulsory notification of tuberculous patients to the Medical Health Officer was established. It was owing to the energies of Dr. W. F. Langrill, the present Medical Superintendent of the City Hospital, that this important by-law was passed in 1902. At that time Dr. Langrill was the Medical Health Officer, and he was ably supported by the Hon. Lieut.-Col. John S. Hendrie, who was Mayor of the city.

There have been many improvements in this city during the past twenty-four years. Whereas formerly there was only one hospital, with accommodation for 100 patients, we now have

two first-class hospitals, the City, with 250 beds, and St. Joseph's with 50 beds. Both of these institutions are splendidly equipped with modern appliances, and over 3,000 patients are treated annually in the wards, and about the same number are treated as out-patients. The surgical work has increased by leaps and bounds, and the results have been excellent.

Two years ago a Sanatorium was established on the mountain, for the treatment of incipient cases of tuberculosis. It has accommodation for 35 patients. The results obtained there have been very encouraging.

Another very important institution is being erected, thanks to the generosity of one of our citizens, Mr. William Southam, namely, a hospital for advanced cases of tuberculosis. We will henceforth be in a position, we hope, to successfully cope with the ravages of this terrible disease. It is thus a great pleasure for us all to have the members of the Association meet here.

Now, in regard to the Association itself. We felt that owing to the tendency of its members to devote themselves to special branches, new sections should be formed. The various subjects could not be fully discussed in the two sections, Medical and Surgical, consequently three additional sections have been formed, namely, Preventive Medicine, Eye, Ear, Nose and Throat; Obstetrics and Diseases of Children. Two additional sections could easily be added, namely, Mental Diseases and Diseases of the Nervous System and Pathology. I firmly believe that if this plan were followed, and the different sections were placed in the hands of enthusiastic men, our annual meetings would be very much better attended.

With 2,500 practitioners in this province, we should have more than 10 per cent. of them at our meetings. Some parts of our Ontario are seldom represented on our programmes. This should not be allowed. During the year hundreds of interesting cases are seen by the different physicians, which are never published. The rule to take careful notes of cases should be more generally adopted. It would then be a very easy matter to get up a short paper which would lead to good discussion with marked benefit to all present.

During the past two years several county medical societies have been formed, and if the officers of these societies were to interest themselves in getting their members to write papers and present them to the Ontario Medical Association, the duties of the officers of this society would be lightened very much.

We want every physician, whether practising in village, town

or city, to come to our meetings, and give us the benefit of his experience.

Many of the papers on the programme this year are by Canadians practising in different parts of the United States. Thus, there are two from New York, two from Johns Hopkins Hospital, Baltimore, and two from Detroit. Montreal has sent some of her best physicians and surgeons to assist us at this meeting, and last, but not least, our brethren across the line, who unfortunately are not Canadians, have graciously laid aside their work and come to us with the best fruits of their labors.

For the preparation of this programme, gentlemen, we are chiefly indebted to the untiring energy and faithful work of the chairman of the Committee on Papers, my friend, Dr. Wallace.

As there are a large number of excellent papers to be read this afternoon, I shall not take up any more of your time, but will proceed with the programme.

Selected Article.

THE TREATMENT OF SUNSTROKE.

By Henry C. Becker, M.D., New York.

In a consideration of the treatment of insolation we take cognizance of two forms, the *hyperpyrexial*, where the temperature is the important point at issue, and the other where an exhaustion or prostration is the important feature; the latter variety, known as *heat exhaustion*, may be mild, moderate, or severe.

In the *hyperpyrexial form* the vital point in the treatment is the rapid reduction of the temperature; the prognosis is fair in direct proportion to the rapidity with which the temperature is reduced, and in inverse proportion to the length of time it has endured. In an emergency place the patient in the coolest and shadiest place available, loosen the clothing, and dash cold water over head and body; with better facilities to hand place the patient in a bathtub of cold water, adding to it pieces of ice; the extremities and body should be constantly and vigorously rubbed while thus immersed. In those favorable cases where the temperature falls it is accompanied by an improvement in the pulse and respiration, and a clearing of the mind; it is well then to take the temperature per rectum every fifteen minutes, and remove the patient from the cold bath when the thermometer registers 102 degrees F. The temperature often falls 2 degrees every fifteen minutes, and may keep on falling even when the patient is removed from the bath; to obviate a sub-normal temperature and a collapse, it is well to observe this rule. When the patient has been removed from the cold bath there may be a rebound of the temperature four or five hours after, particularly in those cases whose temperature has been above 106 degrees F. This can be controlled by cold packs or cold sponging. Cold water enemas are ineffectual unless ice cold, when they become too dangerous for use, the patient being liable to go into collapse. Antipyretics should not be used as a routine method, although in the tropics the hypodermatic use of quinine is

highly spoken of. If there is much struggling or delirium a hypodermatic injection of one-fourth grain of morphine may be given. The sudden shock from the cold water may produce a tonic muscular spasm including the diaphragm; in these cases five minims of amyl nitrite as an inhalation, with an increase in the temperature of the water employed in bathing, along with artificial respiration, if necessary, will tend to overcome the spasm; keep up the artificial respiration half an hour if need be.

There is a strong tendency to congestion and edema of the lungs; this condition should be met by dry cupping and hypodermatic injections of atropine and strychnine. Strong, robust, plethoric individuals with full bounding pulses require one-fiftieth of a grain of nitroglycerin; leeches to the temples and behind the ears are also helpful. After the reduction of the temperature the bowels should be emptied with a stimulating enema.

The after-treatment consists in keeping the patient in bed for several days on a light and easily digestible diet; there is often a subsequent intermittent fever, lasting several days; this is best treated by means of cold sponging and tablespoonful doses of spirits of mindererus given every four hours. For the headache small doses of acetphenetidin with citrated caffeine may be given. Special attention should be given to the bowel and kidney functions; any resulting sequelæ should receive appropriate treatment and care.

In the treatment of *heat exhaustion* stimulants are primarily indicated, and in severe cases, to insure their certain and prompt effect, they should be given hypodermatically.

The slightest manifestation as headache, vertigo, and faintness should be heeded, and the patient immediately removed to some cool and shady room or place. A teaspoonful of aromatic spirits of ammonia in a glass of cold water will suffice in the milder form of cases; if somewhat feverish cold sponging with alcohol and water is indicated. It is in the more pronounced and severer forms of heat exhaustion that heroic means are often necessary to save life; when there is respiratory failure strychnine, 1-30 to 1-15 gr. is to be injected, oxygen gas and artificial respiration may be required and resorted to; in acute heart failure camphor, 1 gr. dissolved in sweet almond oil, 6 m.; or a solution of citrated caffeine, 1 to 2 grs., injected; if pulse is soft and feeble digitalin, 1-200 gr., repeated in an hour if necesary; if pulse is full and bounding, 1-100 to 1-50 gr. nitroglycerin. For reflexly stimulating the nerve centres mustard paste or the douche may be employed.

The after-treatment is rest in bed, with tonic and stimulating medicines and treatment of any resulting sequelæ.

Prophylaxis.—This consists in the prevention of exposure to the direct rays of the sun, moderation in the amount of physical and mental work, the wearing of light and cool clothing during a protracted spell of hot and humid weather. The diet should consist of little meat with plenty of vegetables and fruit; strong alcoholic liquors should be eschewed. Water externally and internally so that bowels, kidneys, and skin may be kept active, for as a general rule a patient who sweats does not suffer sunstroke.—*New York Medical Journal.*

Progress of Medical Science.

OBSTETRICS AND GYNECOLOGY.

IN CHARGE OF ADAM H. WRIGHT, K. C. M'ILWRAITH, FRED FENTON AND HELEN MACMURCHY.

Treatment of Face Presentations.

Rudaux (*La Clin.*, April 3rd, 1908) considers that in face presentation the practitioner must learn how to wait, as much harm is done by interfering with Nature. These presentations, which do not include brow presentations, are diagnosed by palpation and vaginal examination. If the contractions allow it, the depression of the neck may be felt between the smooth surface of the back and the round hard head. The examination per vagina permits the face and features to be distinguished and the position made out. The chin can seldom be definitely recognized, but its position is indicated by the nose, which does not become oedematous, and of which the nostrils are always distinct, and point towards the chin. If these orifices point to the right the presentation is a right one; if at the same time they are directed towards the sacro-iliac symphysis the presentation is to the right and posterior. Face presentations occur once in every 250 labors. The author advises that no attempt be made to change the presentation into a vertex, but that the face presentation be accepted both before and after the head is engaged. The course of labor is slow; very few vaginal examinations should be made, but it is well to auscultate often, so as to recognize early any signs of distress on the part of the fetus. When the chin is not directly under the symphysis the movement of flexion should be retarded, and great care should be taken of the perineum at the time of expulsion. When the head is not engaged in the brim of the pelvis and the membranes are unruptured, internal version can be performed. If the membranes have been ruptured for a long time and there is marked contraction of the pelvis, only symphysiotomy or Gigli's operation will save the child. When, however, the head is engaged the forceps must be applied, but there are cases where the chin rotates backwards and there is so much impaction that the forceps cannot be put on; if the

child is to be extracted alive the pelvis must be enlarged. If the child is dead or its life is hopelessly compromised, the use of the basiotribe is indicated. In applying the forceps special care must be exercised, and a finger should be passed into the mouth to ascertain whether extension of the head is complete, or to complete it by pressure on the roof of the mouth. Delivery is not possible unless the chin lies under or near the symphysis pubis. It is, therefore, necessary to assist rotation to complete itself before exercising traction downwards. After the chin has been brought out from under the pubic arch, it is time to promote flexion of the head by raising the handles of the forceps. This must be done gently, because the forceps only hold the head by its parietal eminences and the grip is easily displaced. The usual precautions against perineal lacerations must be adopted.—*British Medical Journal.*

Primary Epithelioma of the Clitoris.—A Treatment of Two Cases. By Egbert H. Grandin, M.D., New York,

This condition would appear to be of such exceeding rarity that I report the following two cases—the only ones which I have seen during my medical career of nearly thirty years.

Case 1.—In March, 1902, Dr. Albert Kohn, of this city, requested me to see Miss N. in consultation for the purpose of determining the nature of a growth of the clitoris. He told me that he had had her under observation for a few months and that the growth in its initial stage resembled a pimple. When I saw her, a hardened mass of the size of a hazel-nut occupied the region of the clitoris. There was a certain amount of induration of the right labium minus. There were a few glands in the groin. I advised, and performed, wide excision of the clitoris and the labium. Primary union resulted. The report of the pathologist was epithelioma. After a few months, the woman died of general carcinosis.

Case 2.—Seen in consultation with Dr. Henry Griswold, of this city. The woman was aged over sixty, and the clitoris was occupied by a growth the size of a small walnut. There was no glandular involvement and the labia were free. Wide excision was performed. This was in 1903. The report of the pathologist was epithelioma. In September, 1907, I saw the woman again and there was recurrence in the same region, but still no glandular involvement. I again excised the growth widely; and up to date, February, 1908, there has been no recurrence.—*Surg., Gyn. and Obstet.*

Myoma of the Uterus.

Martin (*London Lancet*) discusses myoma of the uterus. Hemorrhage from the uterus is the commonest symptom of myoma, and is present in the great majority of instances. It varies much in different case. The nearer the tumor to the cavity of the uterus, the more severe the flooding. Thus in the subserous growths it is slight, in the interstitial it is profuse, and in the submucous and polypi it is excessive. In some cases there is constant dribbling of watery blood-stained fluid. It is rare for a patient to actually bleed to death from myoma. There usually develops a condition of marked chronic anæmia, which is the chief cause of the brown atrophy and fatty degeneration of the heart muscle, which occurs in many cases of neglected fibroid. It is also the main factor in producing thrombosis and phlebitis of the veins of the pelvis and lower limbs, and secondary embolism of the pulmonary artery. Uncomplicated myomata do not, as a rule, give rise to much pain—never anything approaching the agonies of cancer. Most patients complain only of discomfort and uneasiness. But other complicating lesions, such as adherent and inflamed ovaries and tubes, may cause severe pain. The pressure symptoms are numerous and may call for surgical treatment. Among them may be mentioned constipation, hemorrhoids, varicose veins of the legs and vulva, neuralgia, sciatica, and even retroflexion or complete prolapse of the uterus. But the more serious and distressing group of symptoms are those due to pressure on the urinary organs. Retention of urine, either sudden or of gradual onset, is quite common. It is generally due to a fibroid on the posterior wall of the uterus, retroverting the uterus, and pushing the cervix forwards against the pubes. Cystitis seldom occurs as a result of myoma, except by infection through a dirty catheter. Pressure on the uterus is most apt to develop where the tumor is developing in the broad ligament. Disease of the uterine appendages frequently complicates myoma. Myomata are peculiarly liable to various kinds of degeneration, secondary changes being found in about twenty per cent. of the cases. They may be divided into three groups: (1) Non-malignant degenerations without necrosis. occurring in about fourteen per cent. of myomata; (2) non-malignant degenerations with necrosis, occurring in about four per cent.; and (3) malignant degenerations and complications, also occurring in about four per cent. There are three modes by which a "natural" cure of a myoma may take place: 1. A submucous fibroid may necrose or slough away, or it may be extended

through the cervix as a polypus and drop off. The risks are of course, much greater than the most formidable of the modern operations for fibroids. 2. A myoma may participate in the involution of the puerperium and disappear. This is very uncertain and is more apparent than real. 3. A natural cure may occur by the absorption and disappearance of a fibroid at the menopause. At one time this was looked on as a certainty, but as a matter of fact the presence of a fibroid delays the natural change of life, and instead of the hemorrhages ceasing at forty-five they may go on until the patient is well over fifty. Further, it is just at this period of life that the most serious forms of degeneration are apt to occur. Considering the safety and the certainty of cure offered by modern surgical operation, we are not now justified in advising a patient with a troublesome fibroid to wait for the menopause.—*New York Medical Journal.*

Spontaneous Inversion of the Uterus. A. W. Anderson, M.B. (Edin.), Dalbeattie, N.B.

In the *British Medical Journal* of April 11th, 1908, p. 865, is a note of a case of spontaneous inversion of the uterus in a primipara, with remarks on the rarity of its occurrence. Last December I was called to a case, and found that labor had been in progress for three hours. The presentation was a normal L.O.A. with os fully dilated. I had not long to wait before the membranes ruptured, and the child was born after one or two rather severe pains. When tying the umbilical cord I was surprised to find a large globular mass protruding from the vagina. I found that I had to deal with a completely inverted uterus with an adherent placenta. The placenta I detached *in situ,* and then replaced the uterus, having first given the patient chloroform. She made an uninterrupted recovery. The patient was a young woman aged 22, tall and very thin. She had had one child twelve months previously. I attended on this occasion and there was not any trouble.

A Case of Retroversion of the Gravid Uterus. O. E. Higgens, London, N.

On April 8th I was called to a young primigravida (at the end of her third month), who was suffering from retention of urine. I found the cause to be acute retroversion. After emptying the bladder by catheter, I tried, without success, to rectify the malposition. I then inserted a small rubber ring, wishing, rather than hoping, that it might prevent the recurrence of retention.

A short time previously I had found a ring to be quite efficient in the treatment of retention due to the pressure of a fibroid; but in that case the uterus, though heavy, was free to move. The patient was directed to remain in bed and to adopt the knee-chest position frequently. She suffered no further inconvenience, and on April 11th I found that the pelvis was in the normal condition. Reviews of books quite lately published indicate that active treatment of this accident is not yet universally recognized as harmful. Until recently no one believed that the impacted uterus could escape unaided. How, indeed, should it escape? Impaction produces congestion, and congestion aggravates impaction. Clearly, then, the uterus ought not to release itself. Nothing can be more certain, except the fact that it does release itself—usually, if not invariably.—*British Medical Journal.*

OPHTHALMOLOGY AND OTOLOGY.

IN CHARGE OF J. T. DUNCAN.

In a recent issue of *The Outlook for the Blind* appears a paper on "The Prevention of Unnecessary Blindness a Public Duty," by Dr. F. Park Lewis, Chairman of the New York Commission for the Blind, in which, after dilating on the prevalence of the blindness due to ophthalmia neonatorum, he urges the adoption of the plan approved by the American Medical Association, providing, first, for the enactment of laws, supervising the control and licensure of midwives by the Board of Health; requiring that they be examined and registered in each county, and that they be required to report each case of the disease occurring in their practice under penalty of forfeiture of license and fine; second, the distribution by Health Boards of circulars of advice to midwives and mothers, giving instruction as to the dangers, methods of infection, and prophylaxis of the disease; third, the preparation and gratuitous distribution by Health Boards of the chosen prophylactic; fourth, to obtain at stated periods from midwives and obstetricians a report of the number of cases of ophthalmia neonatorum, which have occurred in their practice during this period, together with a statement as to whether or not a prophylactic was used in each case.—*Jour. A. M. A.*

"The laws of Ohio . . . require the nurse, midwife, or person in attendance upon the infant, to report to a licensed

physician within twenty-four hours after it has been noticed the fact that this inflammation exists, and failure to do so is punishable by fine or imprisonment, or both. Neglect of early treatment may result in blindness within a fortnight.'' (See the May number of THE CANADIAN PRACTITIONER, page 316.)

Dr. de Schweinitz related the clinical history of two cases of Obstetric Injury of the Cornea, one examined immediately after birth, and another as a late result in an adult. In the first patient, a male baby, after a difficult forceps delivery, there was found a mico-shaped cornea, which had assumed the appearance of a kirato globus, with a deep anterior chamber and a diffuse haze of the cornea, thicker in the centre, and which occupied this tissue entirely, with the exception of a narrow rim above and below. . . . The baby died on the eighth day. Autopsy was forbidden.

In the second case there was a delicate, slightly dotted line opacity, 6 mm. in length and 14 mm. in width, in the posterior layers of the cornea, extending in a vertical direction. In other respects the eye was normal, and the vision, after the correction of a high astigmatism, was nearly normal. At the patient's birth instruments had been used, and in addition to the lesion of the cornea there was a scar, also caused by the forceps, 2 c.m. above the brow.

Dr. de Schweinitz briefly reviewed the literature of the subject, making special reference to the capital papers of Thomson and Buchanan and a comprehensive review of the entire subject by Bruno Wolff, and thought that more careful investigation of patients who came with high corneal astigmatism, especially if confined to one eye, might reveal this early lesion of the cornea as the etiological factor.—*Oph. Record.*

Furnishing Glasses for Poor Children.

Investigations made in the Philadelphia schools last year by Dr. Wessels, a medical inspector working under the Bureau of Health, showed that many children were retarded in school progress because of eye strain or other eye troubles which could have been easily corrected by glasses. A large number of these children, however, were too poor to pay for glasses, even of the cheapest make. Some of them were provided with glasses by the School Nurse, from a fund collected for that object by the Visiting Nurse Society. A long step in the direction of relieving many other children whose eyes are defective has recently been taken by Dr. Joseph S. Neff, Director of Public Health and

Charities, who obtained an appropriation of three hundred dollars from city councils to purchase glasses. The prescriptions will be filled by a local optician, and the words "Bureau of Health" will be stamped in the frames of the glasses, for identification in case they should be lost or stolen.

Cleansing Treatment of Chronic Middle-Ear Suppuration.

W. S. Bryant, New York (*Journal A. M. A.*, September 14), has found, in twenty years' experience, that in the majority of cases, chronic middle-ear suppuration will yield to cleansing treatment. He includes cases in which the infected area is spreading and also those with acute exacerbations, both righly considered very dangerous. The cases that do not yield, he says, are those in which there is so much caries that it cannot readily be removed by natural processes; those in which there is active ostitis; those in which sepsis has spread outside the bone; those in which there is some special infection, such as syphilis or tuberculosis, and, lastly, those in which vital parts are involved, requiring immediate attention. In other cases, the essentials are proper drainage, and attention to the condition of the eustachian tube and the nasopharynx. If the drainage is sufficient and there are no collections of thickened material, dry wiping with boracic powder applications, gives satisfactory results. Cheesy material should be wiped out, or syringed out with a strong solution of bicarbonate of soda in neutral salt solution. If this is not sufficient, suction may be employed, and the serous exudate and possible hemorrhage act as an antiseptic wash and help to remove some of the solid particles. A persistent dirty discharge may call for peroxid of hydrogen followed by salt solution, alcohol or silver nitrate. Caries should be treated by cleanliness, and feeble granulations stimulated by silver nitrate. For this, astringents are advised. Several cases are reported in full and a tabulated statement of 30 consecutive cases is given.

Blindness and Death from Wood Alcohol.

Total blindness may result from the inhalation only of wood alcohol (methyl alcohol), and death has been known to result from the same cause. A valuable article on the subject appears in the *Lancet Clinic,* by Louis Stricker. The first case referred to was that of a man employed to shellac the interior of beer vats (many of the shellac varnishes contain a large amount of wood alcohol). The man was overcome with the fumes of the

wood alcohol, became very ill, and had to be removed to his home. His vision became veiled, and by the following evening, 36 hours from the time he entered the cask, he was totally blind. He was seen for the first time three and a half months after blindness had set in. His pupils were dilated *ad maximum;* no reaction whatever. Media perfectly clear. Fundus showed no signs of retinal or choroidal disease. Discs pearly white. Arteries narrow, veins normal. Heart normal. Urine normal. Diagnosis: Acute optic atrophy from inhalation of wood alcohol.

There is no other form of total blindness in both eyes, and followed by optic atrophy, which comes on with such suddenness as that following methyl alcohol poisoning. It stands in a class by itself.

In another case the man, 44 years of age, varnished the interior of a large cask with wood alcohol varnish, remaining in the cask from 7 to 9.30 a.m., not protected in any way, did not have a sponge over his mouth and nose, became totally blind in eight hours. (The usual protection is a damp sponge over mouth and nose, but this was used in the first case quoted and did not prevent the blindness.)

Another case quoted was that of a man doing varnishing in a large apartment building, working in a small bathroom with window and door closed, was found dead on the floor with his brush in his hand. The coroner's verdict was heart failure. The real cause was never suspected; the firm of painters, fearing a damage suit, did not venture to give the information.

These are cases of acute blindness from the *inhalation* of wood alcohol. Blindness and death from *drinking* wood alcohol has been of more frequent occurrence, as is shown by the splendid article of Wood and Buller. They report 153 cases of blindness and 122 cases of death. They report three cases of blindness from rubbing wood alcohol on the body.

Cases of death and blindness from use of methyl alcohol still continue to be reported. It is to be hoped that the denatured alcohol bill enacted as a law by the last Congress will from now on remove the main reason for the use of wood alcohol, since the price of the denatured alcohol is the same or even less than that of wood alcohol.*

The leading manufacturers of Columbian (wood) spirits say that prior to the enactment of the denatured alcohol bill they

*Denatured alcohol is pure grain alcohol to which has been added some blue coloring matter, 2 per cent. of benzine and 2 per cent. wood alcohol, so as to unfit it for drinking purposes and still leave it available for the arts.

manufactured and sold in the United States 100,000 barrels of wood alcohol per year, and that since the enactment of the bill their business has been practically "killed." They are now trying to establish a European market for Columbian spirits, where wood alcohol is largely used in the manufacture of aniline dyes, and, if unsuccessful, they will be obliged to dismantle their plant, which is now practically idle.

PEDIATRICS.

IN CHARGE OF ALLEN BAINES AND W. J. GREIG.

Kernig's Sign in Infancy. J. S. MORSE (in *Archives of Pediatrics*, March, 1908.)

This sign consists in the inability to extend the leg fully on the thigh, when the thigh is at right angles to the trunk; or to flex the thigh at a right angle to the trunk when the leg is extended on the thigh.

Conclusions.—Kernig's sign is almost never found in infancy, either in health or disease, except in meningitis. It is found so rarely in other diseases at this age that its presence in an acute disease justifies, as far as any sign can, the diagnosis of meningitis. It is never present, however, in some cases, and in many others is present only intermittingly. It occurs with equal frequency at all stages of the disease. It is more often present when the knee-jerk is increased than when it is diminished. It is of no value in the diagnosis between the tuberculous and cerebro-spinal forms.

Dr. Koplis, in discussion, said that he agreed with the writer that as a diagnostic element in forms of meningitis in infants under two years of age it is of very little clinical value. In tubercular meningitis its absence is the rule.

Diarrheal Affections of Infants. (KNOX, *Archives of Pediatrics*, April, 1908).

Conclusions.—An examination of the reports coming from the laboratory and from the bedside tends to establish certain facts and explain others before doubtful.

It can no longer be questioned that the true shiga bacillus does produce in culture media a soluble toxin, and that an anti-

toxin is produced in the blood of susceptible animals which is a valuable specific curative agent.

It seems also to be true that there are several other closely related strains of the dysentery bacillus which differ culturally but little from the original type, and less from each other, which are almost as pathogenic for laboratory animals, and which do not produce a soluble toxin, and against which no satisfactory antitoxin has been produced.

Children are susceptible to infection by all three forms, but experience has shown that infants are rarely invaded by the original shiga variety, and only after definite exposure to the disease in adults; but that strains of the dysentery bacilli (that ferment mannite) are more frequently found in infants' summer diarrhea.

It is, of course, recognized that gastro-intestinal affections with diarrhea can be brought on by indiscretions in diet, by mechanical and chemical means, and by other bacteria than the dysentery bacilli. It is true also that the dysentery bacilli may be present in the dyseta of infants exposed to infection without setting up any disorder until the patient's resistance is lowered.

Further study is needed to ascertain if there may not be found some clinical phenomena which can be more surely associated with infection with dysentery bacilli. The exact method of propagation of the disease also needs further investigation. It is quite possible that an antitoxin may be developed for the Flexner variety and its closely related mannite-fermenting organism.

Aspirin Hemorrhagic Nephritis, Case of. By MAURICE PACKARD. (*Archives of Pediatrics,* April, 1908.)

Edw. K. Normal child, 4 1-2 years old, was taken sick with rheumatic tonsilitis. Aspirin in gr. v. doses every four hours was prescribed, with ice spray as a local measure. After two doses fever subsided and the throat looked better, but the child looked worse. He was sleepy and edema was present in the face and over the tabia. Scanty bloody urine. Sediment showed blood casts with fragmentation blood cells, renal epithelium and leucocytes.

Aspirin was stopped, and after a few hot baths patient quickly recovered.

In a week's time the urine was normal. Another dose of gr. v. of aspirin was given to determine whether the hemorrhagic

nephritis was caused by the drug or whether it was an infectious disease with the tonsil as port of entry.

Although the urine was not as red as on the first occasion, albumin with blood casts and renal epithelium again appeared.

Hygiene of the Eye in School Children. (*American Journal of Obstetrics,* July, 1908.) Carhart.

Conclusions.—1st. The increase in late years in the number of children wearing glases is not due to an increase in the number of weak or diseased eyes so much as it is due to the greater strain upon the function of vision necessitated by the more extended use of the eyes for close work in the complex civilization of the present day.

2nd. The normal child is born hypermetropic and without astigmatism. The myopic eye is either defective from birth or has acquired myopia from the excess of eye-strain usually through the "turnstile of astigmatism." Astigmatism is not congenital, but is practically always acquired by excessive eye-strain.

3rd. Kindergarten and primary work should be so arranged as to avoid strain upon the muscles of accommodation of the eye in the plastic years of childhood. Hence, sewing and all wearing exercises should be limited in amount, if not absolutely eliminated.

4th. Systematic study should be begun only when the delicate tissue of the child's eye is sufficiently formed to resist distortion on moderate use of the accommodaion.

This means that prolonged close work should not be allowed until the age of ten or over.

5th. No young child should be encouraged to compete with its companions for prizes. Mental and ocular overstrain are the inevitable result of such a course.

6th. Many so-called lazy children are really suffering from uncorrected refractive error.

7th. Inability to concentrate the mental attention and deficient powers of observation are often caused by bad visual memory, the result of eye-strain.

Peripheral Phlebosclerosis in Childhood. (Martin, *Archives,* March, 1908.)

Recently the author, at the meeting of the American Association of Physicians, called attention to the frequency of the above condition in young adults. Recent observations show that it

may be found also in children from 4 to 15 years of age. Six children were examined and histological specimens obtained. (Cuts are given illustrating the condition.)

One case is given which may be taken as a sample of all:

, 13 years, convalescent typhoid, no history of rheumatism, nor did he show any other lesion of the circulatory system. Examination of the internal saphenous showed marked thickening, the vein feeling like a whip-cord from foot to thigh. A small portion was excised and a section made, which showed that there was very little lumen left in the vessel, owing to extreme hyperplasia of both intima and media.

These children were all in good health, were actively engaged in the ordinary occupations of the institution.

Blood pressure varied but little from normal. Whatever the cause, it is not uncommon, and one would fear great liability to thrombosis. W. J. G.

THERAPEUTICS.

The Treatment of Pruritus Ani.

After fomenting the parts with hot boric acid or phenol solutions of appropriate strength, it is recommended in Memento thérapeutiques des praticiens (*Le Monde Médical*) to apply the following ointment:

℞ Oil of peppermint ..... gtt. xv
Wool fat ..... gr. xlv
Soft petrolatum
Olive oil ..... āā ʒss
M

Following the application of the ointment a suppository should be used, the following being suggested:

℞ Oil of the broma ..... gr. xlv
Cocaine hydrochloride
Morphine hydrochloride ..... āā gr. $\frac{1}{3}$ to gr. $\frac{3}{4}$
M ft. suppositorium No. i.

If the itching is caused by thread worms, the following ointment may be applied night and morning:

℞ Calomel ..... ʒi
Soft petrolatum ..... ʒx
M

or better:

℞ Cocaine hydrochloride ..... gr. xxx
Bismuth subnitrate ..... ʒi
Soft petrolatum ..... ʒx
M

In order to rid the tract of worms, calomel may be given in combination with santonin 1-6 of a grain of santonin being taken for each year of age.

If hemorrhoids are present, either one of the following ointments may be applied night and morning:

I.

℞ Carbolic acid ..... gr. viiss
Ergotin
Extract of hamamelis ..... āā gr. lxxv
Tincture of benzoin ..... ʒiiss
Wool fat
Soft petrolatum ..... āā ʒv
M

II.

℞ Iodoform ..... ʒiss
Extract hamamelis
Extract of hydrastis ..... āā ʒiiss
Zinc oxide ..... ʒv
Lime water
Linseed oil ..... āā ʒv
M

The objectionable odor of the iodoform contained in the last formula makes the ointment difficult of application in some instances, and if necessary the iodoform may be replaced by salol.

In simple pruritus the application of a 1 in 40 solution of menthol in alcohol as a paint will be found useful.

Equally serviceable is the topical application of an ointment made as follows:

℞ Liniment of lime water ..... ʒvi
Carbolic acid ..... ʒi
M

Antitussin.

A. Briess shows that antitussin gave results which were satisfactory on the whole in a series of some 30 cases of pertussis. In most of the cases, in a decidedly convulsive state, he observed, sometimes very quickly, a marked reduction in the attacks as the result of the correct use of the preparation (a 5 per cent. difluor-diphenyl ointment). The vomiting usually ceased after a few days. In uncomplicated cases the majority of the patients in the convulsive stage were completely cured after 2—3 weeks. Similar cases, however, proved refractory to the antitussin treat-

ment; in these he succeeded with inhalations of pyridine and the administration of antipyrine. In paroxysmal cough of catarrhal nature, this author favors the use of antitussin, either by itself, or in combination with other drugs, especially since the external method of its application is convenient, and the remedy is harmless. He emphasises the necessity of rubbing the preparation into the skin with energy, in the fashion of massage.—*Merck's Reports.*

Iodopyrin.

A new indication for iodopyrin is said, by Blumenthal and Weissmann, to be in arterio-sclerosis. If potassium iodide causes marked iodism, iodopyrin is to be recommended. It may be given for a considerable time without producing appreciable secondary actions; presumably the anti-pyrine component of the preparation acts in opposition to iodism, just as has been observed with sulphopyrine. Weissmann describes two cases of arterio-sclerosis in which he obtained satisfactory results by giving doses, first of 0.5 (gr. 8), later of 0.3 (gr. 5) and 0.2 grm. (gr. 3) three times a day for weeks. Iodopyrin is also said to have been of good service in a case of struma, and in intercostal neuralgia, occipital neuralgia, rheumatic inflamed joints, sciatica and herpes zoster.—*Merck's Reports.*

Arhovin.

The therapeutic writings which have appeared during the past year on arhovin are uniformly favorable. N. Zorn and M. Weinberg treated a number of cases of acute and chronic gonorrhea, acute urethrocystitis, gonorrheal cystitis, leucorrhea, and gonorrheal vulvo-vaginitis; they obtained rapid improvement, the urine cleared up, the purulent discharge diminished, and the process of healing was accelerated as the result of treatment with arhovin. Internally they gave 1 or 2 capsules (containing 0.25 grm.) 3—6 times a day; externally they applied a 5 per cent. solution in olive oil. Occasionally the internal treatment alone was found to effect a cure. According to Stock, it is particularly appropriate in acute anterior urethritis, while there is severe inflammation and swelling of the lips of the urethra. Further, arhovin is indicated in complications, such as epididymitis, catarrh of the bladder, and especially in chronic gonorrhea. J. Piket, A. Weiss and E. Schwarz have also obtained good results with arhovin in urinary practice. Its action, in their experience, in anesthetic, diminishes the secretion, and

it has also some effect in inhibiting the growth of the gonococci. As Schwarz found, however, it does not produce a rapid and complete disappearance of the gonococci whether it be given internally or applied locally. Still, it increases the acidity of the urine, and though entirely non-irritant, it certainly has a beneficial influence upon the first stage of gonorrhea, and it is said also to prevent the disease becoming chronic. In addition to the oily solution, arhovin may also be applied locally in the form of bougies containing 0.05 grm. (gr. 5-6), or of vaginal balls containing 0.1 grm. (gr. 1 1-2).—*Merck's Reports.*

Medulla Ossium Rubra.

K. Walko draws attention to a remedy which had not yet been used in the dietetics of gastric diseases, red bone marrow. It is said to have been of very good service especially in all conditions of gastric hyperacidity. The large amount of fat in fresh marrow was found by him to have a powerful inhibitory action on the secretion of acid, and it is completely digested by the bowel. The remedy is given instead of soup, freshly cooked on rusk, or with other food. It is very readily taken, and has no unpleasant secondary effects.

A contribution to the treatment of pernicious anaemia by red bone marrow is given by Gullan. In all the cases treated by him for years he was able to ascertain that the disease was due to a lesion of the digestive organs caused by microbic or toxic infection; under the action of arsenic, there was a diminution in the number of the red blood corpuscles. Fresh red bone marrow, on the other hand, within two months produced a considerable increase (up to fourfold) in the red blood corpuscles and in the hæmoglobin contained in them. The administration of the remedy during meals (spread upon bread) must be carried out perseveringly, even when there is vomiting, if a successful result is to be obtained.—*Merck's Reports.*

Digitalis Substances.

A. Salvisberg established the interesting fact that among mammals those that chew the cud can stand comparatively large doses of digitalis leaves and digitoxin by mouth without showing any reaction. Thus, the stomach of the ruminants has the power of decomposing the active principles of digitalis purpurea, and rendering them harmless to the animal organism, so that the symptoms which appear in man and other animals after eating digitalis do not show themselves. If, however, the digi-

talis substances be introduced direct into the circulation of ruminants, the typical action of the drug is produced. Dottl found that digitalis powder, given internally, has an abortive action. After doses of 10 grm. (gr. 150) he observed the appearance of uterine pains, and mother animals suffering from pericarditis were deliverd without assistance.

For human medicine, the communications of S. Ganser, A. von Bokay, and Stepp are worthy of attention. Ganser prescribed digitalis leaves in an infusion in delirium tremens, having observed that most delirium patients die through cardiac weakness. He gave doses of 1.5 grm. (gr. 24) of the drug per diem, by enema if necessary in case of special difficulty in giving it by mouth. By this treatment he obtained very good results.

Bokay considers it wrong to prepare infusions of digitalis leaves by heating; his observations have shown that the active substances in the drug lose part of their strength for therapeutic purposes when heated. In his opinion the best way is to macerate the digitalis with cold water for at least three hours.

Stepp deals with the question of how to make an infusion of digitalis keep; this is of special interest in prolonged digitalis treatment. He considers he has solved the difficulty by adding a little chloroform to the freshly prepared infusion; chloroform, like acetone chloroform (chloretone) has often been used for the purposes of preservation and sterilisation. He prescribes:

Rp. Infus. Fol. Digital. 1 : 150 grm. (gr. 15 : oz. 5).
adde Chloroform. 25 m.
S. 1 spoonful every 1—2 hours.

or for prolonged digitalis treatment:

Rp. Infus. Fol. Digital. 2 : 100 grm. (gr. 30 : oz. 3 1-3).
adde Chloroform. 25 m.
A spoonful 2—3 times a day.

The latter prescription is said to give astonishing results in vitium cordis and arteriosclerosis. For the first two or three days a spoonful is given three times a day, then a spoonful twice a day until a pulse rate of 72—68 is produced. The doses are then discontinued until the pulse-rate begins to rise again, in which case the further administration of one or two spoonfuls a day is sufficient, and finally all that is required is to give a spoonful once in four, six or eight days, to keep the pulse-rate down. In cases of idiosyncrasy for digitalis the author uses digalen with advantage.—*Merck's Reports.*

The fifth Pan-American Medical Congress will take place at Guatemala City, Central America, August 5-10.

Editorials.

THE CANADIAN MEDICAL PROTECTIVE ASSOCIATION.

The medical profession of Canada is greatly indebted to Dr. R. W. Powell, of Ottawa, for the magnificent work which he has done in connection with the Canadian Medical Protective Association.

The seventh Annual Meeting was held in Ottawa, June 9th. The President, in his address, stated that since the Association was organized, which was in Winnipeg in 1901, not a single case that the Association defended had been lost. He also said when the fact became known among the public at large that the physicians of Canada had at their back an organization of this character it was acting as a deterring influence against causeless litigation, and that year by year there were fewer actions brought against physicians.

The officers elected for the coming year were: President, Dr. Powell; Secretary, Dr. Argue-Fenton; Solicitor, F. H. Chrysler, K.C. During the seven years the Association has accumulated nearly $3,000.

The membership is not as large as it should be, but is increasing from time to time. In 1902 there were 242 members; in 1903, 253; in 1904, 288; in 1905, 351; in 1906, 471; in 1907, 528, and 1908, 553. Out of the whole number for the last year there were 356 from Ontario, Quebec 62, Nova Scotia 24, New Brunswick 28, Manitoba 13, Prince Edward Island 2, Alberta 20, Saskatchewan 8, and British Columbia 40.

We learn from the President's report that a very important case arose late in the summer of 1907, where a prominent surgeon was sued for damages on the alleged grounds that he had caused to be removed important pelvic organs during a laparotomy, without consent and against her expressed wish to the contrary, prior to the operation. No charge was made that the

work was not skilfully done, so it amounted virtually to a case of trespass. We were able to rebut this trumped-up charge, but the case involved a serious and important principle very necessary to fight for, and we had the satisfaction of securing a verdict in our favor. A further troublesome case has just been settled in June after months of fighting. It is difficult to explain how such a case could get into court. The evidence at the trial showed wilful neglect and improper behavior on the part of a ward patient in the hospital. The surgeon made every effort to control the unruly patient and bring his case to a successful issue. The report says the fight was carried to the last ditch, and the committee went to infinite trouble to prepare the case for the defence, but the plaintiff failed to appear at the trial on June 1st, and the case was consequently dismissed.

ONTARIO MEDICAL COUNCIL.

The Annual Meeting of the College of Physicians and Surgeons of Ontario was held in their new building, 170 University Avenue, Toronto, July 7-11, inclusive.

The President, Dr. W. Spankie, in his address, remarked that for less than $21,000 the Council had obtained an edifice admirably suited to its purpose, and had been relieved from the anxieties of the old system of letting offices in its building. He also remarked that the new register contained 3,807 names of members, *i.e.*, 406 more than the former register.

The President welcomed two new Councillors, Dr. C. W. Hoare in the place of Dr. J. L. Bray, the present Registrar, and Dr. H. S. Griffin in the place of Dr. P. Stuart, resigned. The following officers were elected for the present year: President, Dr. S. H. Glasgo; Vice-President, Dr. Ed. P. Hardy; Registrar, Dr. J. L. Bray; Treasurer, Dr. Wilberforce Aikins; Prosecutor, C. Rose; Solicitor, H. S. Osler, K.C.

July 8th.—It was announced at this morning's session that at the last intermediate examination between 60 and 65 per cent. of the candidates failed to pass. Considering that the majority

of those who failed had already passed the primary examination with credit, the opinion was expressed that there must be something radically wrong; either the instruction given in the medical colleges was not sufficient or the examination papers were too difficult, or the examiners were not judicious in their decisions.

The following committee was appointed to investigate the whole matter: Drs. Ryan, Britton, Spankie, Gibson, Robertson, Moorhouse and Temple.

On motion of Sir James Grant, a resolution was passed endorsing the Food Inspection Bill recently passed by the Dominion Government.

A committee to consider the fifth year curriculum reported that, in view of the fact that the medical colleges had not yet had time to complete the details of their fifth year curriculum, it was deemed expedient that no action should be taken in the way of specifying additional work.

The names of 189 physicians have been struck off the register for non-payment of the annual fee of $2. In many cases these are physicians who have left the Province, and all can be reinstated on the payment of arrears.

A committee composed of Drs. Britton, Moorhouse, Bascom, Klotz, Gibson, Adams and Griffin was appointed to consider and report at the present session on the advisability of securing reciprocity between the College of Physicians and Surgeons of Ontario and the General Medical Council of Great Britain, as provided for in the Medical Act of Great Britain.

Dr. Spankie, in his address, recommended the readjustment of electoral divisions. He said it was fourteen years since the present boundaries of the various ridings were established, and great inequalities existed, both in New Ontario and the older portions of the Province.

A committee composed of Drs. Bascom, Lane, Vardon, King and McArthur was appointed to rearrange the boundaries of the electoral divisions, and to ask the Provincial Legislature for legislation necessary to make such changes legal.

Drs. Glasgo, Hardy and Temple were appointed the Executive Committee for the ensuing year.

July 9th.—After an extended discussion, the following resolution was carried: "The attention of this Council has recently been called to the prevalence of crime against the unborn. Be it resolved, That when a detective becomes aware of such a case he be instructed to lay the case before the Prosecution Committee, who will, after careful inquiry, pass the evidence, when deemed advisable, on to the Discipline Committee for action."

In the afternoon it was decided to hold the next Annual Meeting on Tuesday, 6th July, 1909.

Dr. Starr moved to have the examiners meet after the examination to consider the marks given before they handed out the results. This was allowed to stand until after the reception of the report of the Special Committee which is dealing with the question of examinations.

July 10th.—A new committee, to be termed the Prosecution Committee, was appointed to act in an advisory capacity to the prosecutor. The following members of the Council resident in Toronto were placed on the Committee: Drs. Johnson, King, Britton, Hart, Hardy, Temple and Adams. The following were appointed members of the Discipline Committee: Drs. Robertson, Lane, Gibson and Henderson.

It was decided to hold a special session of the Council November 17th, 1908, for the purpose of dealing with the reports of the committees appointed to consider the examinations, the rearrangement of districts and cases of discipline.

The Council then instructed its Discipline Committee to proceed at once to investigate the cases of Dr. D. Webster Shier and Dr. E. M. Cook, who were recently accused of performing illegal operations.

A communication from the West Toronto Medical Association was presented by Dr. Gibson, urging a much higher standard for matriculation in medicine. The communication was referred to the Education Committee.

The Council decided to hold a supplemental examination in Toronto, commencing the third Tuesday in September, 1908. Also to hold the regular spring examinations of 1909 in Toronto, Kingston and London, commencing the third Tuesday in May.

Dr. McCaul introduced the motion to eliminate from the annual published proceedings the reports of discussions. After some discussion, the motion was lost by a large majority.

An illuminated address was presented to Dr. C. T. Campbell, of London, a former President of the Council and a member of the same for twenty-five years. Dr. Campbell resigned from the Council in 1907 because of his appointment as Post Office Inspector to West London District.

A motion was introduced to add to the curriculum, after the words "four months in therapeutics," the words "including electro-therapeutics, hydro-therapeutics and massage." An amendment referring the matter to a special committee on examinations was carried, because it was not deemed expedient to place these subjects on the curriculum without further investigation.

July 11th.—The question of intra-Provincial reciprocity in medical registration was referred to the Education Committee.

The Finance Committee reported a balance on deposit to the credit of the Council of $28,359 in the Sterling Bank, $10,000 in the Bank of Montreal, and $10,000 in the Bank of
The total assets are $79,525, leaving a balance in favor of the Council of $67,025.

The sessional allowance to the members of the Council was fixed at $120, the session being computed to cover six days.

GOOD OLD TORONTO, SANITARY TORONTO.

The press, the medical profession and the whole body of the citizens of Toronto are to be congratulated on the passage of the sanitary by-laws submitted to the citizens on June 27th, 1908. This marks an epoch for Toronto, and undoubtedly her example will be largely followed in the cities and smaller places round the Great Lakes and in the rest of Canada. Many elements contribute to this result. The good work done by Dr. Amyot, Dr. Sheard, Dr. Harrison and others began at last to take effect, and, though the vote was not large, when one considers the time of

year, the number of people absent from the city, the irreducible minimum of apathy, ignorance, stupidity and wrong-headedness to be found in all communities, the invariable power of the Law of Least Action, which keeps people away from the polls, and the number of that worst of all voters, the one who is "sure it will pass anyway," the result might have been worse. One gratifying feature in the campaign is the unanimity with which every organization in the city, almost without exception, held special meetings, even in the dog-days, to give a hearty support to the by-laws. Twenty or thirty organizations did this, among whom may be mentioned the University Women's Club, the Local Council of Women, the Argonaut Club, the Trades and Labor Council, the Guild of Civic Art, the Trustees of Toronto General Hospital, the University of Toronto, the Canadian Manufacturers' Association, and the Board of Trade.

And they were right, both from a medical and from a commercial point of view. Toronto's destiny as a seaport is waiting at her doors. The Canadian climate and water supply are unsurpassed in the world from a health point of view, and never will we allow filthy, stupid and uncivilized habits, forbidden by all sanitary laws, to steal away from us this our birthright. We must be clean, and a clean Toronto is now in sight.

FATALITIES AFTER A SURGICAL OPERATION.

The question as to the responsibility of surgeons for the death of patients who die during operations, or shortly after as the result of operation, has come up for discussion in London, England. A Miss Muirhead died in a London hospital after an operation performed by Sir Victor Horsley. The family physician, Dr. Biggs, stated that the lady became ill three years ago; she first complained of deafness and was sent to an ear specialist, and he agreed with her physician that it was due to central nerve disease. Next she saw an eye specialist, who found optic neuritis; then she saw a neurologist, who diagnosed it a cerebellar tumor and advised operation, which was performed by

Sir Victor Horsley after he had spent a considerable time on the previous day in a most exhaustive examination of the patient.

Dr. Biggs warned the patient that unless she consented to an operation she was certain of becoming blind, and that the operation offered her a mere chance. She decided to run the risk, the other members of her family concurring. The operation caused the patient's death. The attending physician gave the death certificate, which was taken to the Registrar, who later referred the matter to Coroner Troutbeck. Then, although there had been no complaint from the family, Dr. Troutbeck instructed Dr. Freyburger, a pathologist, to make a post-mortem examination. The funeral had to be postponed, causing the family much annoyance, and the inquest was ordered and held amid a chorus of protests from the Muirhead family, from Sir Victor Horsely and Dr. Biggs. The coroner took the stand that the friends of the family and the public in general have a right to know in such cases: (1) Whether the operation should have been undertaken; (2) if it was competently performed.

There is a difference of opinion in the matter. The *Times* backs up the doctors and thinks Dr. Troutbeck should be removed for officiousness. The *Leader,* on the other hand, thinks the coroner is a hero who has directed the attention of the public to an intolerable condition of affairs. Many of the surgeons state that if they are to be summoned to inquests every time a patient dies after an operation they will refuse to operate.

UNPROFESSIONAL CONDUCT.

The College of Physicians of Ontario has on several occasions found great difficulty in proving that a physician has been guilty of disgraceful conduct in a medical sense. What is known as the Catford case is causing much interest in England at present. A young physician named Dr. Nicolas has been practising for some time at Catford, in the S. E. of London. We learn from the London letter in the *New York Medical Journal* that before commencing practice on his own behalf he had acted

as assistant to Dr. Atkinson in the same district, but no bond had been given, and there was no agreement between them as to restriction of practice in the neighborhood. The charge against Dr. Nicolas was that he had systematically canvassed for patients in Catford and had disparaged the professional skill and ability of his principal.

The General Medical Council of Great Britain took up the consideration of the case last November but gave no decision until June. After this protracted consideration the Penal Cases Committee returned a verdict to the effect that Dr. Nicolas was guilty of infamous conduct in a professional sense, and his name was erased from the register.

An appeal has been lodged against this decision. There is also a libel action pending in connection with the case. During the consideration of the case the Council's methods of procedure were attacked by Dr. Nicolas' legal representative and these criticisms will be carefully considered. As the matter is still *sub judice*, the English journals did not discuss the merits of the case. It is generally considered, however, that the judicial functions of the General Medical Council are beset by many difficulties. The very skilful defence of the case has greatly embarrassed the Council, and their ordinary business has been hampered very considerably. The expenses already incurred, and those that will be incurred during the trial of the appeal, will amount to a large sum. It is not improbable that the case may at any time be brought before the general law courts, and there is great fear expressed by many parties that the Council will be finally defeated.

THE BENEFITS OF RADIUM.

On the evening of June 26th Dr. Louis Wickham gave a popular exhibition of radium and its curative effect, illustrated with limelight views, at the Laboratory for Radium in Paris. This demonstration was given by special request as a result of an article published in the *Figaro* some ten days previously,

written by a prominent physician under the *nom de plume* of Horace Bianchon. Through the courtesy of Dr. Wickham we were honored with an invitation, and enjoyed not only the lecture, but the novelty of Parisian enthusiasm, with a picked audience from the best of France: Ministers of State, Senators, Deputies, scientists, and cultured and fashionably gowned ladies. We give extracts from the article above mentioned, which was written in popular style, and not for medical readers particularly:

"Last Tuesday Dr. Louis Wickham and his assistant, Dr. Degrais, head of the laboratory of St. Louis Hospital, presented a great number of photos to the Academy of Medicine, which were taken before and after treatment, evidencing that it is possible to cure and cause to disappear those keloids which grow commonly on badly healed scars. It is the radium which works this wonder; the word is not too strong, for ten years ago such cures were not to be thought of. It is the radium of our glorious Curie, in the form of sulphate, or more commonly of radium bromide. It is mixed intimately with a kind of varnish, so composed that the rays easily penetrate it. A metal capsule contains this radiant varnish. During the time the doctors think fit the apparatus is placed and held in position with the surface which is to be cured. The patients feel no pain whatever; indeed if they have any, it is stilled. The treatment is easy, even children at their mother's breast will continue sleeping during its application.

For a long time I have followed with the greatest interest the researches of Dr. Louis Wickham, physician to the St. Lazare Hospital, Archivist of the Society of Dermatologists, and administrator of the splendid museum of St. Louis Hospital, where for the last 20 years he worked with zeal.

A dermatologist of great merit, and one of the best pupils of Besnier, Fournier and Hallopeau, Dr. Wickham devoted himself a short time after the discovery of Professor and Madame Curie, to the study of the therapeutic action of radium. At first he undertook to observe thoroughly the effects of bromide of radium on epithelial tumors of the skin, on the superficial cancers of the

eyelids, the nose, the ears. He obtained unquestionable and durable cures. In tuberculosis of the skin and lupus he had equally fine results. But when he undertook to treat "plaques lie de vin, ces tumerous érectiles, ces naevi vasculavies, ces angomes caverneux," those "mother-marks," as one is used to say, which disfigure so many faces, he obtained marvellous results. Disappearance of the tumor, the returning of the tissues to a normal, or almost normal, color, and that without the formation of cicatrical tissue and without destruction of the integuments. It surpassed all expectations, so much so that in his report presented at the meeting of the Academy of Medicine on the 28th of January, Professor Fournier used even the words of the letter of Madame Sevigné about the marriage of the "great mademoiselle," to express his astonishment and his enthusiastic admiration.

In a profession so uncertain and deceiving as ours, it is a very rare stroke of luck to discover treatment so efficacious, so painless, and so convenient, that the babes can be cured during their sleep, and which allows an adult free to follow his daily work, with only a bandage to keep the small capsule of radium varnish in its proper place. It is only right and proper to call this discovery one of the happiest and most complete of modern medicine, and, moreover, the last word has not been said.

In the hands of workers such as Wickham and Degrais, Dominici and Faure-Beaulieu, men of scrupulous uprightness and untiring patience, radium appears to me to be called upon to do very great service to humanity. That is the opinion of most of the masters in dermatology. W. H. B. Aikins.

Toronto, July, 1908.

Next year's meeting of the British Association for the Advancement of Science will be held in Winnipeg August 25th to September 1st, 1909. It is expected that the Dominion Parliament will vote a sum of $25,000 for the entertainment of the visitors. The Council of the Association has nominated Professor J. J. Thomson, Professor of Experimental Physics, University of Cambridge, to be president of the meeting.

CANADIAN HOSPITALS ASSOCIATION.

The annual meeting of the Canadian Hospitals Association was held in the Parliament Building, Toronto, April 20 and 21.

After Miss Brent's presidential address, Dr. W. J. Dobbie, of the Weston Sanitarium, read a paper on "How to deal with Tuberculosis as a social problem."

It has been estimated, he said, that there are in Canada each year some 40,000 sufferers from tuberculosis, with about 8,000 deaths. In Ontario a conservative estimate gives 12,000 cases per year, while in the ten years from 1896 to 1906 there were 36,700 deaths, or 11 per cent. of the deaths from all causes. Figured out in dollars this meant an annual loss to the Dominion of $24,000,000.

Having thus shown its ravages Dr. Dobbie mapped out a plan of campaign to fight the plague.

(1) Attention must be given to the care and disposition of advanced cases, (2) the recognition and treatment of incipient cases, (3) the prevention of the spread of the disease among the healthy members of the community. He suggested the organization of an executive council of prominent citizens, who would be assisted by sub-committees.

A special hospital need not be considered at the outset. The initial cost of such a hospital would not fall short of $1,000, and the cost of maintenance could not, for a small number of patients, be made much less than $1 per day. This made it too costly, and he suggested the work should start with free dispensaries, home classes, a visiting nurse, compulsory notification and registration.

To accomplish these various ends, education of the people is essential. In all educational work concentration should be on (1) the necessity for early treatment, (2) importance of fresh air, (3) avoidance of alcohol, (4) avoidance of the spitting nuisance.

Legislation might be needed, but he was sure it would be forthcoming. At present bulletins were sent out to instruct people respecting grain, and sheep and cattle. There was an apathy towards tuberculosis.

Dr. J. K. M. Gordon, of the Gravenhurst Sanitarium, opened the discussion.

On one point, he said, I would lay even greater stress than Dr. Dobbie, and that is the educational point.

I would go back to the Public School, so that in two generations, if not in one, the public would be informed of the danger. Gymnasiums had been taken up, and there were many overtrained consumptives as a consequence. The school itself has

been neglected. In rural schools too little attention is paid to the sanitary conditions. Furthermore the educational system should be along the linnes of prevention. Educate the physicians, the patients and the children. We find that the tent colony has not been a success.

Keep Out Disease.

Dr. Kendall, of Gravenhurst, felt that the tuberculosis problem rested with the people at large.

The educative point, he said, is no doubt the first and greatest point.

He thought the nurses worked in a sphere where they could do much good, especially among the poor.

"Fortunately," he declared, "we do not know much about the really poor classes. But we should be careful to prevent the arrival of tubercular immigrants. I do not think we should have to take care of the victims of disease in the other countries."

Dr. Bruce Smith said, If we were to adjourn now we would have still been well repaid for coming together. But I think a question we might well discuss here this afternoon is: Are the general hospitals doing anything to care for poor tubercular cases? They say it is not their province. Then whose province is it? The sad fact is that many are allowed to die in want, not only in want, but are spreading the disease. We are not taking care of chronic cases.

He suggested that general hospitals, particularly in rural districts, should erect separate buildings by way of an annex, for the care and treatment of tubercular cases.

I believe, he said, the Government would be willing to give financial encouragement to any hospital doing this work.

He agreed that there was danger from the arrival of immigrants who were already victims of the disease, but he had been told only last week by Mr. Scott, of the Domininon Immigration Department, that all immigrants who showed any traces of disease would be immediately sent back.

Mr. J. Ross Robertson, when called on by the president, said. If the Government will supply the money I have no doubt the general hospitals and sanitoriums would be glad to do this work. I understand the sanitoriums have empty beds, but they have no money for maintenance. If Dr. Smith will persuade the Government to make an extra grant, I believe both the general hospitals and the sanitoriums would undertake the work.

Mr. Robertson then alluded to the danger from diseased immigrants.

My impression, he said, is that almost anybody can get into this country. That is the easiest thing in the world.

Speaking generally, he thought too much was left to private philanthropy. He suggested that the Government should vote $100,000 more and give the hospitals a chance.

Dr. Helen MacMurchy then read a paper on the milk supply.

Your grandfather, I have no doubt, said Dr. MacMurchy, kept his own cow. That was long ago and was mentioned by way of contrast to the complications of the milk problem of the present day.

There are 1,129,000 cows in Ontario. The hospitals were the largest consumers of milk in the province and should insist on getting clean milk before they paid for it. Hired men were not always particular about having their hands clean.

Dr. MacMurchy then turned to the danger of disease from milk. She pointed out that tuberculosis was as prevalent among cows as among human beings.

This is largely a woman's question, she submitted. If a few women in each town would demand to know where their milk comes from, and then spend a day on the farm occasionally, I think we would have no more trouble.

Dr. MacMurchy had seen several boxes labelled "coloring matter for dairy purposes." She wondered what that was for and whither it was going. She opposed pasteurization as being unnecessary.

"At the suggestion of Mr. J. Ross Robertson," continued Dr. MacMurchy, "I took these specimens of milk, one from each can, in a certain hospital, using a sterilized dipper, and putting each specimen at once into a sterilized bottle. I took the specimens directly to the University Medical Building, arriving before 7.30 a.m., and placed them in the refrigerator. The specimens were examinned without delay, and the report of the bacteriologist is as follows:

" 'No. 1—5,300,000 bacteria to one cubic centimetre.

" 'No. 2—8,100,000 bacteria to one cubic centimetre.

" 'No. 3—384,000 bacteria to one cubic centimetre.'

"The Toronto hospitals all appear to get their milk from local dealers, except one hospital, which gets it direct from the farm.

"Between 8 a.m. and 12 noon on January 20, 1908, I procured specimens from hospitals B., C., D., and E. The temperature at 8 a.m. was 34 degrees and at noon 38 degrees. The bacteriological count was as follows:

"B.—14,800 to one cubic centimetre.

"C.—6,240,000 to one cubic centimetre.

"D.—1,250,000 to one cubic centimetre.

"E.—3,060,000 to one cubic centimetre."

Ordinarily pure milk should not have more than 600,000 germs in summer and 50,000 in the winter months, but the number often falls as low as 2,000.

We are behind in the matter of milk. We are behind the United States and we are behind Great Britain. Why? It is because we are too easily satisfied with ourselves.

"About ninety per cent. of the milk supplied to Toronto is not pure," declared Dr. Robertson, of Ottawa. He thought, therefore, that Strauss' system of pasteurization would be very beneficial in the hospitals.

Dr. A. D. MacIntyre, Superintendent of the Kingston General Hospital, read a paper on Fumigation.

Contagious Diseases.

Dr. Charles Sheard, Medical Health Officer, discussed the question of "contagious diseases in relation to hospital management." He said it was unavoidable that patients should sometimes contract contagious diseases in hospitals. It was also true that at times there was a mistaken diagnosis on the part of the physicians. Furthermore there was a tendency amounting almost to carelessness on the part of physicians to send to hospitals acute maladies from places where contagious diseases prevail.

If I was conducting a hospital on sanitary lines, declared Dr. Sheard, I would put over the door the sign: 'No visitors allowed.' Visitors to public institutions are a nuisance and an annoyance. They are an annoyance because they bring in infections and there is no power on earth that can stop them. I don't know every house in the city where scarlet fever or measles exist; no human mind could. It is only in the families of the rich where a physician is called in case of measles.

Thus a mother on Centre Avenue might have a child in the hospital and have another just recovering from measles. She takes the child free from the rash only a week and she goes to see the other child in the hospital. The result is that the trail is left behind.

Of all contagious diseases the most contagious is measles. It often breaks out more than once, it may break out frequently on the same patient. Hence measles was dreaded in public institutions. It spread so rapidly that one case admitted to a general hospital would likely be followed by 25 or 30 other cases. It meant death to some patient, if it followed some other disease.

Next to measles scarlet fever was the most contagious disease.

Then came the dread diseases of diphtheria and smallpox. As to the former he warned them to beware of the nasal diphtheria. Then smallpox. Terrible smallpox! Well, I would rather have smallpox in my hospital than any other contagious disease. There is no accounting for tastes, but that's mine. Why? Because you know just where you are. It is a lasting disgrace, that in this age there are those so lacking in intelligence as to relax the vigilance that demands that every child should be vaccinated as soon after birth as possible. You can curtail smallpox by vaccination, and by no other means.

In closing, Dr. Sheard presented in eloquent words the contrast between the public view of the hospitals 30 or 40 years ago and at the present. He attributed it partially to the great improvements in the hospitals, and he made reference to the new Nurses' Residence and the Hospital for Sick Children.

"When," he said, "we visit an institution such as we did last evening, and I take the liberty of mentioning this magnificent institution, which reflects the greatest credit on the medical profession of the province, an institution which is second to none in the world, with its magnificent wards, its sunshiny rooms, its spacious corridors, with all that skill and science and money can make them, with its capable staff and everything that refinement and gentleness can contribute, and when we remember that this institution is for the care of the poor, that its doors are open to the child who suffers, and who comes from homes where gentleness and kindness are submerged in the terrible struggle for existence; when we see all this we understand why public opinion with regard to these institutionns is different to what it was 30 or 40 years ago.

Then we must remember that all this is possible only through the generosity and liberality of men who, though not members of the profession, have devoted their time and talents and money to this purpose. We are glad to have them present with us this morning, that we can tell them that their labors and their work are not unappreciated. When in future years we see their portraits on the wall, and remember what they have done, there will come again the message of this Easter-time:—'Inasmuch as ye have done it unto one of these, ye have done it unto Me.' "

Miss Brent heartily concurred in all Dr. Sheard had said about contagion. Out of her own experience she called up incidents to corroborate the statements respecting the spread of measles and the danger from visitors. At the Hospital for Sisk Children visitors were allowed only one day a week.

There is one point that has not been mentioned, said Mr. J.

Ross Robertson. Since 1897 this infectious business has cost the Hospital for Sick Children $15,000. In cold, hard cash it has cost us $15,000 because we have allowed visitors, and I think it would be a good thing for the community and a first-class thing for the hospital if the key was turned on every visitor, father, mother, brother, sister or anyone else while the child was under treatment. But a stream of visitors has poured in and out, and when it is so hard to get money we have had to spend $15,000 because people were not careful.

Psychiatric Hospitals.

Dr. C. K. Clarke, who formed one of the Government commission to Europe to investigate the subject, made some observations on European psychiatric hospitals. He pointed out that it had been decided to erect a psychiatric hospital for the insane for Ontario in connection with the new hospital. He mentioned some of the features of European experience, as dealt with at greater length in the printed report.

But the only point I would like to throw out for discussion this morning, is that there is not a close enough relationship between the hospitals and the asylums. I refer particularly to the necessity for an interchange of nurses. A training in the care and treatment of mental diseases is as essential as the training in the treatment of other diseases in making up the well-equipped nurse.

I desire to congratulate Ontario, said Dr. H. M. Hurd, of Johns Hopkins Hospital, Baltimore, in opening the discussion, on the step it has taken in deciding on a psychiatric hospital.

He agreed that no nurse was absolutely trained unless she knew something about mental diseases, which constituted the highest form of nursing.

Dr. D. C. Meyers concurred that the psychiatric hospital should be as close as possible to the General Hospital. If it could not form part, he was glad it was to be erected adjoining. He thought, however, it would be injurious to mix the nervous cases with those more advanced, and he pointed out that 110 beds, the number proposed, would not be sufficient even for the nervous cases alone.

He cited the change of name to hospital for insane, and he also pointed out that less insane were to be found in the jails of the province this year than ever before.

There is now no necessity for even one patient to go to jail, said Dr. Clarke. He also stated in reply to another point that a hospital in Germany, which had only 110 beds, accommodated over 2,000 patients a year.

Hospitals and Public.

Hospitals are public utilities, declared D. T. Sutton, editor of the National Hospital Record, Detroit, in opening the discussion on Hospitals and the Public.

He said hospitals should be run in the interests of the public, and not of a few physicians. The day of close corporations in hospitals was past. He urged the hospitals and the public to get closer together and said the public should be furnished with full information.

Mr. J. Ross Robertson, resuming the discussion, referred to the difficulty of getting money. That was why hospitals had to accept $5 a week from municipalities, when, as a matter of fact the patient cost $10. That was why they advertised that $5,000 would endow a cot, when $10,000 was really required. He mentioned in this connection the generous donation of $10,000 made by Cawthra Mulock after a visit to the Hospital for Sick Children. The Government was doing well, but soon must be persuaded to grant 30 cents per day instead of 20. He declared again drastic restrictive methods would have to be adopted to protect hospitals from visitors.

The following officers were elected for the coming year:

President, Dr. W. J. Dobbie, of Weston.
First Vice, Dr. A. D. MacIntyre, Kingston.
Second Vice, H. E. Webster, Montreal.
Third Vice, Miss Brent, Toronto.
Fourth Vice, W. W. Kenny, Halifax.
Fifth Vice, L. L. Cosgrove, Winnipeg.
Secretary, Dr. J. N. E. Brown, Toronto.
Treasurer, Miss Patton, Toronto.

Cure of Incurables.

Miss M. M. Grey, Superintendent of the Toronto Hospital for Incurables, discussed the question of the care and management of incurables. She pointed out the manner in which the aged or incurable were beaten or put to death in heathen lands. In this civilized country conditions were much better, but there was still room for improvement.

I regret to say, she observed, that we get more bedsores and evidences of neglect from other hospitals than from any other source. More hospitals were needed for the treatment of incurables in this country, and those we have should be enlarged.

Training of Nurses.

Dr. Henry M. Hurd, of Johns Hopkins Hospital, Baltimore,

discussed the proper length of the period of training for nurses. First leaving out of consideration the exact length of any course, he pointed out some of the essential requisities. The course should be properly graded.

The third requisite should be the restriction of the amount of time spent in practical work to eight hours with two hours at least each day for study. Then there should be a preliminary training.

A course of three years is advisable only where shorter hours of service have been established and where the hospital is large enough to give a good training in all branches. In the matter of training the smaller and the larger hospitals should co-operate. Courses of training for nurses should be standardized and no one should bear the title of registered nurse who has not been fully trained in the various branches. Special private sanitaria or hospitals owned by physicians and maintained for their own patients should cease to operate training schools, but should supply themselves with nurses who have already received training. Nurses should not spend two years or even one year in a limited specialty.

A great deal has been said about the eight-hour system, remarked Miss Patton, in opening the discussion. I think this is an excellent plan in some hospitals where it can be adopted, but it is not the ideal system.

If nurses spent only eight hours on duty where would they be the remainder of the day? In her own hospitals the nurses worked only a little over eight hours a day. She thought the term could not be shorter than three years. In fact in some cases three years were too short. She did not think that a nurse should be allowed to graduate at the end of three years if she was not competent to be entrusted with human lives.

The seventy-sixth Annual Meeting of the British Medical Association was held in Sheffield, July 24-31. The address in Medicine was delivered by Dr. J. K. Fowler, the address in Surgery by Mr. R. J. Pye-Smith, and the popular lecture on Dust and Diseases by Mr. Edmund Owen.

There has been an increase of over 2,000 students in the University of Toronto in ten years. The total number for last year was 3,545, of whom 1,774 were in Faculty of Arts, 754 in Medicine, 724 in Applied Science, 211 in Faculty of Education, 78 in Household Science, and 8 in Forestry. During the year two new Faculties were added, the Faculty of Education and the Faculty of Forestry.

Personals.

Dr. Andrew Gordon, of Toronto, sailed for Europe July 11th.

Dr. H. J. Hamilton, of Toronto, went to Manitoulin Island July 11th.

Dr. W. Spankie, of Wolfe Island, Ont., sailed for Glasgow July 18th.

Dr. Edmund E. King, of Toronto, is enjoying a holiday at Havelock, Ont.

Dr. T. G. Roddick, of Montreal, is spending a portion of the summer in Germany.

Dr. W. Hume Cronyn, of Toronto, is spending part of the summer at Murray Bay.

Dr. J. N. E. Brown, Superintendent of T. G. Hospital, sailed for England July 5th.

Dr. James Caven, of Toronto, is spending part of the summer at Lake of Bays, Muskoka.

Dr. G. Sterling Ryerson, of Toronto, is spending the summer at his residence in Sturgeon Point.

Dr. Chas. O'Reilly, of Toronto, will sail for Dublin August 8th, and remain abroad for two months.

Dr. W. H. B. Aikins has returned from Europe, and, resuming work, will engage in office and consultation practice.

Prof. I. H. Cameron and Dr. Clarence Starr sailed for England June 30th, and expect to return early in September.

Dr. Francis Shepherd has been elected Dean of the Medical Faculty of McGill University, in the place of Dr. T. G. Roddick, resigned.

Dr. Geo. A. Bingham, of this city, left July 15th on a trip to the Pacific Coast, and expects to return to Toronto about the middle of August.

The Hon. Dr. Pyne left Toronto July 10th to visit Great Britain and the Continent. He will study especially the methods of technical education, and also the methods of teaching the deaf, dumb and blind.

Dr. J. T. Fotheringham, of Toronto, announces to the profession that after his return from London, about September 1st,

he will confine his work to office and consultation practice and diseases of children.

Dr. Jennie Gray and Dr. E. R. Gray announce to the profession that they will remove from 263 Wellesley Street to 98 Carlton Street July 15th. Dr. J. Gray will in future confine her attention to consultation work and diseases of women.

Dr. Samson Gemmell has been appointed Professor of the Practice of Medicine in Glasgow University, in the place of Sir Thomas McCall Anderson, deceased. Dr. McCall formerly occupied the Chair of Clinical Medicine, and previous to that had acted as assistant to Sir Wm. Gardiner for some years.

Mr. Francis Mitchell Caird has been appointed Regius Professor of Clinical Surgery in the University of Edinburgh, in place of the late Professor Thomas Annandale. Mr. Caird was a dresser and clinical clerk under Lord Lister for several years, and is reputed to be very skilful, especially in abdominal surgery.

We are glad to learn from the *Cleveland Medical Journal,* the *Buffalo Medical Journal,* and several other medical journals in the United States that Dr. Chas. A. L. Reed, of Cincinnati, will be a candidate for a seat in the United States Senate in the place of Senator Foraker, whose term expires next March. We regret that Dr. Reed's numerous friends in Canada will not be allowed to vote.

Book Reviews.

PROGRESSIVE MEDICINE. A quarterly digest of advances, discoveries and improvements in the medical and surgical sciences. Edited by Hobart A. Hare, M.D., Professor of Therapeutics and Materia Medica in the Jefferson Medical College of Philadelphia, Physician to the Jefferson Medical College Hospital, etc. Assisted by H.R.M. Landis, M.D. Volume II. June, 1908. Philadelphia and New York: Lea & Febiger.

The contents of the second volume this year are: Hernia, by Dr. Coley; Surgery of the Abdomen, exclusive of hernia, by Dr. E. M. Foote; Gynecology, by Dr. J. G. Clark; Diseases of the Blood, Spleen, Thyroid and Lymphatic System, by Dr. Stengle; and Ophthalmology, by Dr. E. Jackson. All these articles are up to the standard set by *Progressive Medicine* many years ago, that is to say they are all of exceptionally high merit. We have had occasion to commend this quarterly so many times that it seems useless repetition to say again that it is beyond all doubt the finest thing of its kind in the English language. No practitioner who tries to keep up to date can afford to be without it. Everything he wants to know of work in the past year is told concisely and well by a master hand. Should he wish to read more fully, there is a good bibliography appended. If one is preparing an article for a journal there is no other place where he can get the facts so quickly. It is therefore, an absolute necessity to every up-to-date physician.

DISEASES OF THE NOSE, THROAT AND EAR, MEDICAL AND SURGICAL. By W. Lincoln Ballinger, M.D., Professor of Otology, Rhinology, and Laryngology, University of Illinois, etc. Illustrated with 471 engravings and 16 plates. Philadelphia and New York: Lea & Febiger. 1908.

This is a complete and interesting book on a very important subject, and will be found useful for both specialist and general practitioner. The author gives a brief analysis of interdependence and co-ordination of the various organs and parts of the body, in order that the reader may obtain a proper comprehension of the relation of the nose, throat and ear to general medi-

cine and surgery. The elementary facts as to the breathway are described in a clear and interesting fashion. The etiology and treatment of inflammatory diseases of the nose and accessory sinuses are also well described. Equally able and clear are the descriptions of diseases of the throat and ear.

In order to give the general practitioner a fair idea of the scope of the book, we may say that all the operations, whether difficult or easy, are described in detail as to all steps. Most of these are really intended for skilled specialists. In addition, however, we have to speak in the highest terms respecting the chapters on everyday diseases and conditions, such as the following: Epistaxis, ceruminous plugs in the meatus, pharyngitis, tonsilitis, laryngitis, diphtheria, foreign bodies in the larynx, trachea, bronchi, oesophagus, adenoids, etc.

Diseases of the Heart. By Prof. Th. von Jurgensen of Tubingen; Dr. L. von Schrotter, of Vienna. Edited, with additions, by George Dock, M.D., Professor of Medicine, University of Michigan, Ann Arbor. Octavo of 848 pages, illustrated. Philadelphia and London: W. B. Saunders Company. 1908. Cloth, $5.00 net; half-morocco, $6.00 net. Canadian agents: J. A. Carveth & Co., Limited, Toronto.

Dr. George Dock, of the University of Michigan, is the editor of this magnificent work on Diseases of the Heart, and we can endorse all he has said in presenting this volume to the medical profession:

"Several excellent works upon diseases of the heart have appeared within the last quarter-century in Germany, and it seems strange that none of them was translated into English; especially strange when we consider the many and important contributions made in that country to the normal and pathologic anatomy of the heart, the physiology of the heart and circulation, the methods of diagnosis, the pharmacology of cardiac remedies, and the application of non-medicinal measures to the treatment of patients with heart disease. To be sure, all these discoveries were available to and utilized by American and English writers, yet it would seem of interest to see more directly how discoveries so important would affect the literature and the methods of treatment of those to the manner born. This can now be done with all the advantages and disadvantages of collaboration, and I think most readers will agree with me when I

state my belief that the lack of a simple division of the material and a common point of view is more than made up by finding in one book the sound learning and wide clinical experience of Professors von Jurgensen and von Schrotter and the deep and broad training in anatomy, physiology and pathology, as well as the excellent clinical observations of Professor Krehl.

"In accordance with the wise view of the editor of the series, I have not attempted many or radical alterations or additions. I did not wish to change the native flavor of the work, but tried to secure accuracy of language and of statement, to correct the few verbal errors that had slipped into the original, and to make the medicinal preparations conform to the U. S. Pharmacopeia."

The Oxford Medical Series.

A System of Syphilis. Edited by D'Arcy Power, M.B., F.R.C.S., and J. Keogh Murphy, M.C., F.R.C.S.

This work is designed to be an exhaustive treatise on the subject of this disease and its various manifestations, both ordinary and rare. Each volume is fully illustrated with original illustrations, many of them direct color photographs, and is complete in itself. Price: Single vols., $12.00 each, or to subscribers, $66.00 complete. Volume I. now ready. Other volumes shortly. Canada: D. T. McAinsh & Co., Toronto.

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The Nose and Throat.....St. Clair Thomson, M.D., F.R.C.P.
The Ear.....Hunter Tod, M.D., F.R.C.S.

VOLUME VI.

The Public Services—The Navy.....Fleet-Surgeon E. P. Mourilyan, Staff-Surgeon W. H. Richards, Surgeon W. P. Yetts.
The Army.....Introduction by the Director-General of the Army Medical Service, Sir Alfred Keogh, K.C.B., Lieut.-Col. Melville, R.A.M.C., Major C. E. Pollock, R.A.M.C., Lieut.-Colonel Leishman, R.A.M.C.

Selections.

The Anesthesia Problem.

Apparently a good deal of unrest is at present existent amongst the public, and probably also amongst the medical profession in regard to the dangers attending the use of anesthetics. Not a few fatalities consequent on the legitimate employment of these substances have been lately recorded. These fatalities are not confined to cases where general anesthetics were administered, but also have included cases of death from local anesthesia as well, and as the cases of deaths from anesthesia when occurring in public institutions are usually the subjects of a coroner's inquest, they are seized upon by the daily press, and by a certain section of the press considerable prominence and comment are attached. As regards deaths occurring in private practice from the use of anesthetics, it appears that it is not necessary to report them to the coroner, nor need mention of the circumstance be included in the certificate of death; hence, as Dr. F. J. Waldo, the Coroner for the City of London, has remarked in a recent letter to the medical press, there is no possibility of judging as to the number of fatalities in private practice as compared with hospital practice. Not only so, but as a coroner is not obliged to hold an inquest on a death resulting from an anesthetic, even when occurring in a public institution, it is evident that the accumulated statistics with regard to these deaths are very imperfect. Dr. Waldo thinks that the subject is of such importance as to demand the appointment of a Royal Commission with ample terms of reference, and that at all events it ought to be made compulsory that these deaths, wherever they occurred, should be reported to the Registrar-General.

In view of the scientific knowledge which has accumulated within recent years with respect to the action of the various anesthetics, and in view also of the circumstance that each of our hospitals has skilled anesthetists attached to it, it is certainly a matter for considerable anxiety that the percentage of such deaths remains as high as it is at the present time. It seems to be a moot point whether this mortality is due to the differences in the constitution of our present population, or whether it is due to difficulties in diagnosis, etc. At a time when chloroform was the only anesthetic used, and when it was employed in a more or less haphazard fashion, the percentage of deaths resulting from its use did not appear to be any more, if, indeed, it

was quite as high, as that which now occurs under anesthetics which are alleged to be safer than pure chloroform. It is no use going into the vexed question of the causes of fatal anesthesia. That is a matter about which physiologists continue to dispute, but there is one point upon which we may lay stress, and it is this: that in the case of hospitals, the administration of the anesthetic should be done by an anesthetist, who is also sufficiently expert in the diagnosis of those conditions of the heart and lungs which contra-indicate the use or the prolonged use of the anesthetic; though on the other hand, before the days of the professed anesthetist, the surgeon in charge of the case would see to it that a competent examiner certified the patient as safe to undergo the anesthesia. In the pre-chloroform days, the surgeon's skill lay largely in the rapidity with which he operated; but since the introduction of anesthesia, rapidity in operating has been deliberately, and, perhaps, culpably ignored. But apart from this, there can be no doubt that in many hospitals where numbers of urgent cases are regularly dealt with, it is necessary that the anesthetic be given by the house-surgeon, perhaps in somewhat rough and ready manner, and under conditions which are not favorable to its reception. In view of this fact, it might be as well to lay down a regulation that an apparatus for accurately measuring and regulating the supply of chloroform, etc., be in constant use. There are at the present time such appliances in use, but probably not as much as they ought to be. In the *Medical Magazine* for September, 1906, page 568, we described an apparatus of this sort, termed the Roth-Draeger Oxygen-Chloroform or Ether-Narcosis apparatus, which has already been very favorably reported upon by several of our leading hospitals. It professes to be an improvement on the dropping method, and has the advantage of not being complicated. During the administration of the anesthetic the patient inhales oxygen with the chloroform or ether.

At a discussion which was recently held at the Medico-Legal Society of London some very important facts and suggestions were made with regard to this subject, and it appeared evident, from the general tenor of the speeches by those who were eminently qualified to judge, that this whole question of anesthesia ought to be put on a more satisfactory basis. The profession would doubtless readily perceive the necessity of realizing this fact, and set itself to solve a problem which is of such vital importance to its own credit, and also to the general public, whose confidence it must maintain.—*The Medical Magazine.*

Miscellaneous.

The Nurse Day.

Few wage-earners work twelve hours, or more, a day, and great as are the responsibilities of the nurse to the hospital, it should not be forgotten that the responsibilities of the hospital to the nurse are equally great. It is evident that the time is coming when these relations will need to be re-studied and re-adjusted. The petition of the nurses in the Toronto General Hospital for an eight-hour day is a sign of the times.

Moreover, it is a very serious indictment against hospital training that there is a genral impression that nurses in the last year are broken down in health. We have no hesitation in saying that hospital nurses, as a rule, are worked too hard, and have too long hours, or, what is the same thing, not enough time off duty. An excellent symposium on this subject was published on June 1st, in the *National Hospital Record.* It seems to be the general opinion, as expressed in the *Record,* that two relays of nurses, with longer off-duty hours, say two or three hours per day, with a half-day each week, and special rest-hours for Sunday, is the best solution of the problem. The Superintendent at Toronto General Hospital, with all the difficulties of the situation before her, has succeeded in giving the 127 nurses now on duty there a half-day, beginning at 12.00 noon, each week, for the summer at least. The broader and more unselfish the outlook, both of the Hospital authorities and the Nurses, the sooner the situation will improve. There is not a little truth in the somewhat extreme letter which recently appeared in a Canadian paper, "Nurses as Martyrs." Yet in this occupation, as in every other, though there are martyrs, saints, and heroes, the great majority are good average ordinary women, and too much should not be expected of them.—*The Canadian Nurse.*

Art and Prudery.

A certain London evening paper has lately broken out into a ludicrous excess of moral censorship. It seems as though a member of the staff of this periodical, whilst walking down the Strand a week or two ago, happened to look up at the new buildings of the British Medical Association, whose frontage had just been disclosed to the public view by the removal of

part of the hoarding. The distant vision of some of the eighteen statues which adorn these premises at once inspired him to write an indignant protest against their hideous immorality. Although the silly season is not yet due, the editor seems to have discerned by a flash of journalistic genius that the pose of outraged modesty has distinct possibilities even in the middle of June. From this point of view the editor and his staff must be congratulated on their foresight and enterprise, for they have provoked the man in the street to look for offence where none is, and have set the town talking about the "Strand statues." And what, after all are these statues? They are single, symbolical figures, some draped, some nude, placed at a height of forty or fifty feet above the ground, and totally devoid, in our opinion, of indecency, or immorality. Personally, we do not admire them as works of art, and in spite of the warm approval of many distinguished artists and critics, we maintain that several of them are ugly. But to find the remotest suggestion of impurity in these figures seems to us to presuppose in the mind of the observer, if not impurity, at least a talent for smelling out unintentional nastiness, which is even worse than prudery.—*The Hospital.*

Sugar.

Sugar is often given a bad name from a physiological standpoint, but in many instances it is questionable whether it is deserved. It seems inconceivable that the bountifulness with which the world is supplied with sugar should mean anything else than that it is designed for human food. Sugar is one of the most powerful foods which we possess, as it is the cheapest, or, at any rate, one of the cheapest. In muscular labor no food appears to be able to give the same powers of endurance as sugar; and comparative practical experiments have shown without the least doubt that the hard physical worker, the athlete, or the soldier on the march is much more equal to the physical strain placed upon him when he has had included in his diet a liberal allowance of sugar than when sugar is denied to him. Trophies, prizes, and cups have undoubtedly been won on a diet in which sugar was intentionally a notable constituent. It has even been said that sugar may decide a battle and that jam after all is something more than a mere sweetmeat to the soldier. The fact that sugar is a powerful "muscle food" accounts probably for the disfavor into which it falls, for a comparatively small quantity amounts to an excess, and excess is always inimical to the easy working of the digestive processes. A strong

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Original Communications.

THE CLINICAL ESTIMATION OF THE PRESSURE OF THE CEREBRO-SPINAL FLUID.*

By R. D. Rudolf, M.D.

Associate Professor of Medicine in the University of Toronto.

The method of lumbar puncture was introduced to the profession in 1890 by H. Quincke, of Kiel. Since that time it has been used a great deal, and is looked upon, according to Rothmann, of Berlin, as one of the most valuable contributions to our clinical armamentarium for the study and treatment of diseases of the nervous system.

Lumbar puncture is used for the obtaining of some of the cerebro-spinal fluid for chemical and microscopic examination, and also for the study of the elastic pressure that the fluid is exerting within the cranio-spinal cavity. It is with the latter part of the subject that we are here concerned.

The subarachnoid spaces of the brain and spinal form the only cavity that normally always contains any considerable quantity of fluid. This fluid is constantly exerting a positive pressure upon the surrounding and contained structures, and it was partly with the object of measuring this pressure that Quincke first advocated his method of lumbar puncture. Since 1890 he has again and again urged that this pressure should be measured as a routine method whenever lumbar puncture is considered necessary, but this is certainly not usually done, it being much commoner to find the pressure merely guessed at by noting how rapidly the fluid drops from

* Read at the meeting of the Ontario Medical Association.

the canula; or it may spurt. During the past winter we have been doing it a good deal in the Toronto General Hospital and find the results interesting and sometimes of value.

The apparatus we use is of the simplest, and consists of a long glass tube bent at a right angle near to one end. This end is connected by a flexible rubber tube with the canula, and upon the rubber tube is placed a clamp. The whole apparatus is sterilised, and then filled with sterilised normal saline solution, and by the use of the clamp this fluid is allowed to escape until there is about 120mm standing in the vertical arm of the glass tube. The object of thus filling the tube up to this mark with the saline solution is that we may estimate the pressure of the cerebro-spinal fluid without much of this escaping first from the spinal canal, as would be the case if it ran into an empty tube. I have not seen this method mentioned anywhere and it seems of value.

The method of lumbar puncture that we use is the ordinary one; the patient being upon his side with the head low, and the back as much bent as possible. The only anesthetic that we have employed has been ethyl chloride. The little operation seems to give some pain at times, but not to a great extent, and often no more than is caused by the administering of a hypodermic injection. We puncture in the third lumbar space, where one is well below the level of the spinal cord, and it seems easiest to reach the spinal canal by keeping to the middle line. As soon as the first drop of fluid escapes from the canula showing that the subarachnoid space has been reached, the rubber tube is passed over the end of the canula, and the cerebro-spinal fluid pressure is quickly registered. It is more convenient not to use any scale upon the vertical tube, but merely to mark the levels of the fluid with a glass marking pencil, and afterwards to measure the height at one's leisure.

In a normal individual the fluid pressure is about 100 mm. of water, but anything between 40 and 150 is, according to Quincke, within the limits of health.

There are three fluctuations of a normal character noticed in the column of fluid: (a) One synchronous with the heart beat, (b) one synchronous with the respiration, the pressure falling with inspiration and rising with expiration, (c) a slower variation of a somewhat rhythmical character occurring about every ten to thirty seconds, and causing a variation in the height of the column of from 10 to 30 mm. The exact nature of this fluctuation is not clear. Further, any straining

or excitement at once sends the pressure up, and Nawratski and Arndt found the column to rise to 800 mm. during an epileptic fit in a case where it had previously been normal. If the patient's head be passively raised, and much more so if he be raised to a sitting posture, the pressure will rise very much. This rise is of course of hydrostatic nature. Theoretically the difference here should be about 600 mms., that being about the average height of the top of the cranial above the point of lumbar puncture, but, owing to the fact that the skull is a closed and rigid cavity, this amount of change does not occur. Kronig found that about 40 per cent. of the total height registered, and we found that it varied between 154 and 334, and the average (in 9 cases) was 256.7, which is 42.8 per cent. of the average 600 mms..

The fluctuations in the pressure due to the respiration and pulse are, according to Henneberg, only *transmitted* to the lower dorsal space, and hence when they are absent this absence is a valuable distinguishing point between myelitis and compression myelitis.

Without going into the very complicated question of what keeps up the normal pressure of the cerebro-spinal fluid, one may say that it depends upon the relation between secretion and absorption, and also upon the amount of solid contents. For example, if a large cerebral abscess rapidly form, this would tend to increase the total pressure within the cranio-spinal cavity. Compensation will be attempted here by either increased absorption or decreased secretion or both, but such compensation is often insufficient, and we have a pathologically raised pressure within the cavity of the skull and spine.

The communication between the subarachnoid spaces in the skull and the spine is normally so free that any increased pressure is soon equally distributed, and can hence be measured in the lumbar region. If, however, as sometimes happens, the communication between the two cavities is mechanically interfered with there may exist within the cranium a high pressure while within the spinal cavity this may be low, and in such a case lumbar measurements are of no avail. If, however the fontanelles be open and are bulging, showing an increased intra-cranial pressure, and yet the pressure in the lumbar region be low, then we could argue that there must be some mechanical obstruction about the foramen magnum due perhaps to meningeal thickening or some other structural cause.

Under pathological conditions the pressure of the cerebro-spinal fluid frequently rises. These conditions are always, according to Quincke, within the cranium, as it is here that the chief secretion and chief absorption both take place. The conditions which may give rise to increased pressure may come under the three headings of (a) proliferation of tissue which decreases space, such as tumors, etc., (b) purulent or serous exudates either within or without the brain, (c) effusions of blood either into the brain or between its membranes.

Frequently in diseased conditions the pressure reaches 300, 500 is high, 700 extremely high, but 1,000 has been recorded. As elsewhere in the body, a rapid rise will produce more acute symptoms than a gradual accumulation of a much greater extent. The nervous structures are able to accommodate themselves to an increased pressure if only given time.

There is apparently no relation between the pressure of the cerebro-spinal fluid and the blood pressure. In one of our cases, one of cerebral abscess following middle ear disease, the cerebro-spinal fluid pressure was 230, and yet the systolic blood pressure was only 90 mm. of mercury. On the other hand the blood pressure may be high, and yet the cerebro-spinal fluid pressure not raised as in a case recently observed in which there were periodical attacks of cerebral compression accompanying a cerebral tumor not of the base. During one of these attacks the cerebro-spinal fluid dropped rather slowly from the canula, showing that there was probably no marked increase in the pressure of the fluid, and yet the systolic pressure was well over 200 mm. This case was observed before we had begun to actually measure the pressure, which deprives the observation of much of its value.

When in various diseased conditions, especially in meningitis, when it is considered advisable to draw off some of the cerebro-spinal fluid the actual measurement of the pressure is of great importance.

The drainage can then be done via the glass gauge, and we can accurately know when the pressure has fallen to normal and hence the drainage should cease. Suppose, for example, that the pressure be found to be 500 mm. we could allow the fluid to escape until the pressure fell to 150, and then stop. To reduce it to below the normal suddenly would probably incur the risk of producing hemorrhage into the central nervous system from the removal of the support to the surface of the brain and spinal cord.

Occasionally it is found that the pressure falls very rapidly when only a very small quantity of the cerebro-spinal fluid has left the spinal canal. Quincke explains this by saying that a more or less complete obstruction about the foramen magnum, due to the abnormal brain being forced down as the pressure in the spinal canal is removed, has taken place. It is very urgent in such a case to at once stop the drainage. In one of our cases something of this sort happened. He was a man, aged 40, who was admitted unconscious, and apparently uremic. The urine contained albumin, and many casts. The leucocytes numbered 19,200. He had frequent fits, and Babinski's sign was present. The cerebro-spinal fluid pressure was only 54 mm., but fluctuated freely with respiration and the heart beat, and was easily raised by raising the head, all this proving that the communication between the cranium and spinal cavity was free. A few drops of the fluid were allowed to escape, and the pressure quickly fell to 40 mm., and stayed there. Post mortem examination in this case showed thrombosis of the lateral sinuses.

The only complication that we have had after lumbar puncture has been considerable headache, often lasting for a day or two. On the other hand it may not be amiss to mention that in functional nervous cases the psycho-therapeutic effect has been marked.

In this preliminary communication one would close by urging that in every case where lumbar puncture is considered advisable for diagnostic purposes the pressure of the fluid should be measured. Further, it seems most necessary that where the pressure is high and the fluid is being drained off to give relief, this withdrawing should be done *via* the measuring tube in order that we may the better know what we are doing, and when to stop.

REPORT OF A CASE OF JUVENILE PARESIS.

By J. G. FITZGERALD, M.D.,
Clinical Director-Pathologist, Toronto Asylum; Assistant Psychiatrist, Toronto General Hospital, and
W. T. WILSON, M.B.,
Assistant Physician, Toronto Asylum.

The infrequency with which cases of juvenile paresis are seen in Canada might lead a student of current literature to regard it as unlikely that such cases were to be met with. It is with the purpose therefore of calling the attention of the profession to this rather unique condition that the following case is reported.

It is not our intention to review the entire literature of the subject; we will merely point out certain of the outstanding features that may assist in the diagnosis of other cases.

The condition was first described by Clouston in 1877, under the title of "Juvenile General Paralysis." Since the appearance of this first publication a fairly large number of cases have been reported, and interesting and valuable contributions to the literature of the subject have been made by Alzheimer, Mott and others. One of the most, if not the most important point elucidated by these workers is, that juvenile paresis never appears except in individuals who have suffered from congenital syphilis, in other words syphilis is a necessary etiologic factor in the causation of the disease. A second almost equally interesting fact has been established by Mott, and is illustrated in our case, namely, that the juvenile general paretic may show none of the usual signs of congenital syphilis. The real significance of this is of the utmost interest, and if we grasp it many analogies between this and certain cases of paresis in adults are evident. It is not at all uncommon for instance to get from a paretic a history of syphilis ten or fifteen years antedating the onset of the mental disease, but very frequently these patients show no evidence of a former syphilis, and they are insistent that they were entirely cured; to all outward appearances they were; but years after paresis develops.

So it also frequently happens in the juvenile general paretic the obvious symptoms of congenital syphilis are wanting, but fifteen or twenty years after birth the disease appears. Whether or not syphilis is the necessary factor in the causation of dementia paralytica is not definitely settled, and it would

seem, that, even with the recent advances in serology along the lines followed by Wasserman and Platt, it will be some time before the clinician can say definitely that syphilis is, or is not, necessary for the production. This is the only position an observer can fairly take, with our present knowledge, and a non-judicial leaning to one or other view is evidenced by the assumption of any other attitude.

One of the writers is engaged at the present time in a study of complement deviation in the cerebro-spinal fluid of paretics, and the results will be announced at a later date.

The history of our patient is as follows:

D. H., aged 16, Hebrew, single; public school education.

Family History.—Father living; apparently in good health. Denies having had syphilis. Is somewhat alcoholic, and has the reputation of having been a frequenter of disorderly resorts, and a friend of women of the demi-monde. His wife in describing her husband spoke of him as being "pretty sporty." Other and more definite information has been obtained which would point to the father having been exposed on many occasions, and it is the opinion of the writer, because of further evidence that will be adduced, that he has had syphilis.

Patient's mother is 54 years of age, and is in good health. She is a Jewess, and of a neurotic temperament.

There is no consanguinity between the parents.

History of the mother's pregnancies is as follows: Married when 18; her first four pregnancies all ended in miscarriages. She next gave birth to a healthy child, who is living, and has shown no evidences of physical or mental derangement. The next child lived only three weeks and was abnormal—possibly a monster. Of the next three children—two boys and a girl—the boys are healthy and well developed; the girl is distinctly neurotic, but a clever musician. The child born next lived only seven months and was never healthy. Following this there were twins, who lived only five days, dying in convulsions. The patient was the last child.

Personal History.—His personal history is interesting. He weighed eleven pounds at birth; was said to have been an unusually healthy child; had no evidences of any disease; no rash or other signs of congenital syphilis. When about three weeks old his nurse in cleaning out his mouth scratched the hard palate with her finger; this evidently became infected, and a doctor, who was called in said the child was suffering

from thrush. A mouth wash was prescribed, which patient's mother believes was too strong, because within a week the patient lost the use of his limbs, had vomiting and was very ill. This condition lasted three months when it apparently cleared up.

The significance of this trouble and its exact bearing on further developments, is rather difficult to determine. As a child the patient was precocious and unusual, but believed by his parents to have been brighter than the other children. Was a good boy; attentive to his music and read a great deal, according to his mother. He did not care to associate with other children; preferred to work at his music. The patient tells us that he made only fair progress at school, and was in the senior fourth class when he left school at the age of 14. He also said he usually adorned the foot of his class. He had early evinced a great interest in music, and his teacher reported that he made unusually good progress in his musical studies. His interests were not those of the ordinary boy of his years; his leaning towards things musical is believed to have accounted for this. He had no alcoholic history. In religion he was an orthodox Jew.

Present Illness.—The present illness. This probably dates back to the time when patient was fourteen years of age, and as is often the case exact particulars in regard to prodromata are extremely difficult to ascertain. We know, however, that the patient while getting off a street car had some sort of a dizzy spell, and would have fallen had not a fellow passenger supported him. Just at this time also he began to complain of being unable to concentrate his attention on anything other than his music, and he had some sort of an attack which lasted one week when there was a considerable degree of clouding of consciousness; some memory defect was also noted at this time. We learn that during the next two years the patient remained at home, running errands and assisting his father. During this time there was nothing to show that the disease process was developing, other than possibly some increasing childishness and a memory defect. Suddenly the patient became mildly grandiose; made many purchases without his parents' consent, and did not appear to be at all worried at not being able to pay for what he bought. Showed pronounced motor restlessness and had some vague hallucinatory experiences. He was sent to the General Hospital, Toronto, in June, 1908, and two days later was transferred to Toronto Asylum.

On admission he was in a condition of mild excitement; showed a marked feeling of well-being. Great motor-restlessness and considerable childishness.

His mental status was as follows: His general reaction indicated that his psychosis had extended over a considerable period, because gross psychic deterioration was evident. He had a memory defect for events both in the recent and remote past, and there was a lesion of the recording faculty. His school knowledge was recalled only with difficulty, and was rudimentary and fragmentary. His spontaneous attention was weak, and voluntary attention often distractible, difficult to maintain and direct. His general fund of knowledge was very childish in character, and there was little spontaneous thought production. He gave a history of auditory hallucinations. He was slightly grandiose but had no definite delusional fabric. His insight into his own condition was meagre, and his judgment was impaired.

A short time after admission he developed definite delusions of grandeur; believed he was worth millions of dollars; owned automobiles and was an extremely important personage. His physical examination revealed unequal, irregular and spastic pupils. The optic discs were normal. There were tremors of the lips, tongue and hands and patient's handwriting was tremulous. He had a speech defect, there being considerable slurring in articulation, particularly evident when patient was requested to repeat test sentences; tendon reflexes were diminished. Heart, lungs and abdominal organs negative; no weakness on either side. Organic reflexes intact. No Babinski or Oppenheim signs, and no ankle clonus, and a subjective complaint of vision being defective. An examination of the patient's visual fields was made, but owing to his distractability of attention the results were uncertain.

Lumbar puncture was done and there was a spinal-leucocytosis of twenty-five cells to the cubic millimetre. The proteid content was increased and the fluid was held under increased tension. Some of the cerebro-spinal fluid was taken to determine whether or not there was binding of complement with luetic antigen, thus ascertaining whether specific anti-bodies were present. Hemolysis was present, and no binding of complement occurred. A definite diagnosis of juvenile paresis was made because of the combination of physical and mental symptoms, and the spinal leucocytosis. His memory defect could be well demonstrated by requesting him to play some-

thing he formerly knew, on the piano; almost invariably he forgot what came next after playing a few bars.

A short time after admission he became filthy in his habits, showed great emotional lability, with at times marked irritability. At the present time he shows signs of progressive mental deterioration, proceeding rather rapidly.

Just recently the patient gives a history of having had a focal attack; it was characterized by twitching of the right arm and right side of the face. The patient described the attack very well, comparing the twitching of the muscles to what occurred when a doctor had given him electricity, on a previous occasion. This is the only seizure he has had to date.

The symptom-complex then, that the patient presents includes, memory-defect, delusions of grandeur, general mental enfeeblement, tremors, speech defect, pupillary disturbance, a history of a focal attack and a spinal-leucocytosis. We believe therefore that the patient is suffering from juvenile paresis.

ADDRESS DELIVERED BEFORE THE GRADUATING CLASS OF THE TRAINING SCHOOL FOR NURSES OF THE WOMEN'S AND CHILDREN'S HOSPITAL, SYRACUSE, N.Y., MAY 30, 1908.

By Henry L. K. Shaw, M.D., Albany.

It was with some hesitancy that I accepted the invitation to give the graduating address this evening. I felt you were entitled to better treatment at the hands of your hospital staff, and while I question the wisdom of their choice, I feel and appreciate the honor of this occasion. As a physician I take pleasure in congratulating the members of the graduating class of the Women's and Children's Hospital on the completion of their course of training.

Medicine and nursing have and always will be, closely allied. In the parable of the Good Samaritan you recall how the Levite or lawyer and the priest studiously avoided the sick, wounded man, while the Good Samaritan, who was then, as now, a physician, bound up his wounds, took him to an Inn—it may have been a hospital—and provided a nurse.

The Jewish race had a wonderful insight into the value of sanitation and preventive medicine. The laws ascribed to Moses are not excelled by the most sanitary code of to-day. Jewish societies were founded with the sole purpose of visiting and caring for the sick long before the advent of Christ. In the early Christian Church some of the women workers were especially concerned with visiting and nursing the sick. St. Paul speaks of the deaconesses whose chief duties were the care of the poor and the sick. They ranked with the clergy and were ordained by the bishop. Phoebe was perhaps the first deaconess, and was a friend of Paul. He testifies to her ability as a nurse in that "She hath been a succourer of many and of myself also." She is credited with having started the work of the deaconesses in Rome when she made her visit there, taking with her the letter from Paul to his friends.

Until recently most of the women who devoted their lives to this work took upon themselves solemn religious vows and belonged to certain orders. The daily self-sacrifice of these women, the extent of which will never be known, constitutes a bright spot in the dark ignorance and superstition of medieval medicine.

Systematic nursing, outside of distinctively religious nurs-

ing orders, dates back to Johannes Gossner, of Berlin, who founded a "Woman's Society for Nursing the Sick" in 1833. This society sent previously instructed or trained nurses into homes not only in Berlin, but at a distance. He disliked the title "deaconess" and employed the term "pflegerin" or nurse, which is now in general use.

To Theodor Fliedner, however, is the credit given of popularizing nursing as a career and profession. Florence Nightingale herself made a pilgrimage to Kaiserwerth, and spent some time in the Fliedner School and familiarized herself with their methods and manner of treating the sick.

It is a fact, not widely known, that Dr. Valentine Seaman, one of the medical staff of the New York Hospital, instituted the first system of instruction to nurses on this continent. He organized a course of teaching in 1798, and gave a series of 24 lectures, including outlines of anatomy, physiology, and the care of children.

Nursing has attained the position of a practical scientific profession only in recent years. An important law in biology is that the excessive growth of any organism leads to its division. So in nursing. As the course of training lengthens and new opportunities for usefulness are presented, a tendency arises to specialize even in nursing. The name of your hospital suggests this thought, and to-night I wish to discuss very superficially the important period of childhood.

John Fiske has shown that of all animals, man has the longest period of infancy. This is true not only as to the actual time involved, but proportionately to the natural duration of life. This period of plasticity is the factor which has permitted man to rise so far superior to the other animals. The life of the codfish is a simple one. It is chiefly concerned with securing food and avoiding danger. It has little to learn from experience and requires no education. It has no infancy. The young puppy is quite helpless at birth, but his infancy is short, and he soon crystalizes into an adult dog. From a study of comparative biology, it is noted that the higher the intelligence of the adult animal and the more complex its life activities, the longer is its infancy or period of development. Fiske was right when he said that "it is babyhood that has made man what he is" and "out of the helplessness of the infant comes the helpfulness of man."

The keynote of this period is development. One-third the life of the individual who completes his three-score years and

ten is devoted to his development. In the first year he increases three times his birth weight. The brain and nervous system are only imperfectly formed at the time of birth. Scientists have conclusively shown that most of the child's earliest and many of his later movements are purely reflex, and not necessarily dependent upon the higher centres. This unripe condition of the nervous system is peculiarly sensitive to both internal and external influences. Children should not be looked upon as adults in miniature. They are distinctly and decidedly different, and every nurse and physician should bear this fact constantly in mind.

The early training and influences should be adapted for his unripe condition for they cannot be similar to that of the adult. For the same reasons, disease, although induced by the same cause, will follow a different course. There are a number of diseases occurring only in young children. Escherich has devised a division of the several periods of childhood which is based on certain distinctive physiologic and pathologic peculiarities of each period.

Never in the history of the world, certainly not in modern times, has so much intelligent and earnest effort been directed to the care and welfare of children as to-day. This has become a great national problem in several European countries for the birth rate is rapidly diminishing, and the infantile death rate is enormous. The study of mortality records in our own State shows what strides are being made to prevent the unnecessary slaughter of our babies. The number of deaths in New York City per 100,000 of population has fallen from 1,160 to 620 in the last decade. In Rochester it has fallen from 584 to 340, and in Yonkers from 880 to 660.

A calculation based on the present population shows an annual saving of the lives of 12,000 children under five years of age in New York City alone.

These striking results are due to many influences, but chiefly to an intelligent appreciation of the value of hygiene and preventive medicine in early childhood. The establishment of hospitals devoted to the special needs of children where nurses and physicians can receive practical training and instruction has had an important bearing in bringing about this result. The technical difficulties in the nursing of sick children have been demonstrated and overcome during your course of training, and this is not the place to enter into a discussion of how to nurse sick children or how to modify milk for infants' use.

One point which cannot be emphasized too strongly or too often is the value of maternal nursing to the child. Statistics show that out of every 100 bottle fed babies, about 50 die during the first year, and of every 100 breast fed babies, only about seven. Further than this there are many more gastro-intestinal diseases among the remaining fifty than are to be found among the 93 breast fed infants.

In several cities of France and Germany the municipality pays a premium to poor mothers as long as they stay at home and suckle their babies.

The nurse has an important duty in this regard. Not infrequently it is solely on her advice that a baby is deprived of its rightful and natural heritage. The mother will often accept the nurse's judgment in this matter without consulting the physician, and the nurse should realize her responsibility. I have seen many babies the victims of nutritive and digestive diseases resulting in some instances in death, due to the mistaken judgment of the nurse or physician.

The nurse should assist the physician not only in the sick room, but in his efforts to educate the public. Preventive medicine is the highest branch of our science. How much better it is to prevent disease than simply to cure it! The reply attributed to Dr. Osler when a woman sought his sympathy because Providence had taken away her baby, that "It was not Providence, it was dirty milk," has deep significance. Perhaps the chief factor in the reduction of infant mortality is that of clean milk. Dr. Abraham Jacobi, whose wisdom we all admire, recently stated that in his opinion the greatest advance in artificial infant feeding during recent years, is the providing of pure milk.

The Department of Agriculture at Washington and Albany are very active in efforts to raise the standard of milk throughout this country and state. They send bulletins broadcast to the farmers in an effort to educate them. This is slow work and credit is due to the medical profession in obtaining more definite results. A physician in Newark twenty-one years ago found himself confronted with the task of feeding his own son. The responsibilities of foster fatherhood weighing heavily, he began a search for a pure milk supply. Discouraged and baffled in this attempt he interested the New Jersey Medical Society in this work. After two years the committee appointed to study this question discontinued their efforts as the task seemed well nigh impossible. The State Dairy Commis-

sioners wrote that "such a radical reform may not be accomplished in our generation." This aroused mighty indignation in the heart of Dr. Coit, and he formulated and put into effect the Essex County Medical Milk Commission. They, in brief, secured an intelligent dairyman whose dairy, cows, and methods were sanitary. As the number of bacteria are an index to the cleanliness employed, a bacteriologic standard was set. Milk coming up to all the requirements of this committee of physicians received their approval and was stamped as certified by the Milk Commission. This was the first certified milk, and the same plan has been adopted by twenty-seven medical societies in twenty-seven different cities in this country. The Onondaga Medical Society followed this plan three years ago, and through the efforts of its Milk Commission you are able to obtain certified milk in Syracuse.

The nurse enters into the home life of the patient more intimately than does the physician, and she should strongly urge that all milk used for the sick room, and for the children should come from a dairy known to be clean and sanitary. If the people insist on pure milk, it can be obtained.

A hopeful sign of the times is the rapidity with which infants' milk depots are being established in this country. These so conclusively proved a practical solution of the summer infantile mortality problem in France that now over one hundred such depots are supported by municipalities in a large number of cities. Last year in the United States there were twenty-one cities in which such milk stations were in operation. In nearly every instance these are supported by private philanthropy. These depots have passed the experimental stage, and should not be dependent upon the uncertainty of private charity.

John Spargo says in a recent work that "it is possible to save tens of thousands of baby lives each year in the United States alone, through the establishment of infants' milk depots, conducted upon scientific principles. Private philanthropy has shown the way. Is there civic enterprise to follow?"

The object of these depots is broader than the name implies. They are not solely to provide pure milk, but to teach the mothers how to care for their babies, both in summer and winter, how to feed them properly, and then provide them with the food they ought to have.

They should be under medical supervision, but the most im-

portant work is that of the nurse who superintends the actual preparation of the bottles, and who goes into the homes and sees that the directions are carried out.

In the warfare against tuberculosis, the nurse is in the thickest of the fight and has the hardest work. She is responsible for the hygienic care of the sick and for the instruction and protection of the family. The visiting nurse and home treatment go hand in hand. She must preach and put into practice the gospel of fresh air and hygienic living.

A word in closing more particularly to the graduating class. You have done good work during these few years of training, and this community has the right to expect much from you. The cheerful, intelligent care of the sick, the relief of suffering and distress, and the improvement of social conditions open the way for a life of useful service. It has been said that people may be divided into three classes: Those who give little and ask for little, those who give little and ask for much, and those who give much and ask for little. This is especially applicable to nurses. The choice in which of these divisions you are to be classed is left to your own conscience. May I offer for your life and daily inspiration the words of St. Paul: "We then that are strong ought to bear the burdens of the weak, and not to please ourselves."

THE VALUE OF THE REFLEXES IN DIAGNOSIS.*

By J. S. Risien Russell, M.D., London, Eng.

It seems probable that no better use can be made of an opportunity like the present than to attempt to show that, in spite of much that you may see written to the contrary, the reflexes are of the utmost value in the diagnosis of affections of the nervous system.

An attempt will be made to show that the reflexes are of great value:

1. In the diagnosis of organic from functionary affections of the nervous system.
2. In the diagnosis of one organic disease from another.
3. In localizing the seat of the morbid process.
4. In determining the extent and severity of the mischief.
5. That there are limitations to the value of the reflexes.
6. What part they play in the diagnosis of maladies outside the realms of neurology.

1. Diagnosis of Organic from Functional Affections.

One is inclined to question either the observation or the judgment of the author who, having elicited the extensor type of plantar reflex after an attack of convulsions, nevertheless concludes that the attack has been hysterical and not epileptic.

That true epilepsy may occur in a person otherwise hysterical, and that an epileptic attack may be followed by an hysterical state, are facts too well recognized to call for more than passing notice; but it is difficult to refrain from a desire to have the opportunity of observing the attack from its inception to its conclusion, before accepting the statement that hysteria was alone responsible for the convulsions which permitted the extensor type of plantar reflex to be elicited in the subject of the fit.

Abolition of the knee-jerks, followed by their exaggeration, coupled with ankle clonus, and supported by the extensor type of plantar reflex, form a combination which we have good reason to agree must be aids to the diagnosis of genuine epilepsy, as contrasted with either hysteria or malingering.

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* Abstract of Address in Medicine delivered at the meeting of the Canadian Medical Association, Ottawa, June 10th, 1908.

2. The Diagnosis of One Organic Disease from Another

Let us take a common example. A patient experiences difficulty in walking, owing to the inco-ordinate condition of his lower limbs. Two of the most common diseases likely to be responsible for this are tabes dorsalis and disseminate sclerosis.

How quickly it can be determined which of these diseases exists! No knee jerk, no ankle jerk, and the plantar reflex not altered to the extensor type in tabes make striking contrasts to the exaggeration of the kneejerk; exaggeration of the ankle-jerk, amounting, it may be, to clonus, and the plantar reflex of the extensor type in disseminate sclerosis.

Even if, in the latter disease, the knee and ankle-jerks fail us by being absent instead of being exaggerated, the plantar reflex is not likely to play us false. And if it does, is there not still the pupil reflex on which we can fall back for assistance? The pupil which fails to re-act to light while it preserves the possibility of re-acting on accommodation, is a phenomenon sufficiently rare in disseminate sclerosis, and common in tabes, to make it a further point of contrast between these two diseases.

Take another example. The patient has atrophy of the small muscles of the hand. One of the first things we are anxious to know is whether or not the reflexes are altered, for much depends on whether they are, both in regard to diagnosis and prognosis. Exaggerated knee-jerks, ankle-clonus, and the extensor plantar reflex tell their tale, for it is clear from them that the spinal cord is involved by the morbid process that is responsible for the muscular atrophy. Thus, by testing these reflexes, we at once glean information that is of the greatest import. By testing the arm-jerks and the jaw-jerk, the diagnosis may be carried a stage further, for in the presence of an exaggerated jaw-jerk or clonus there is little likelihood that any condition other than amyotrophic lateral sclerosis is to be held accountable for the muscular atrophy. Although the Rontgen rays have done much to facilitate diagnosis under these conditions it cannot be said that they have in any way robbed the reflexes of the value that attached to them before the rays were put to such use. It may be safely said that the rays have supplemented, not supplanted, the reflexes in this sphere of their usefulness, for while they may reveal an accessory rib, caries or other disease of the cervical vertebræ to account for the muscular atrophy, in the absence

of these conditions they cannot tell us whether the atrophy is of central or of peripheral origin, nor can they further give us the good idea the reflexes can as to which of the several affections of the spinal cord is likely to be responsible for the condition.

Two affections that may easily be confounded, and that present considerable difficulty of diagnosis at times, although at other times the clinical pictures are so widely different that there is no possibility of confounding them, are cerebellar tumor and disseminate sclerosis. A proper appreciation of the different behavior of the reflexes in the two conditions will go far towards clearing up the question that is in doubt; indeed, the diagnosis may largely, if not entirely, depend on what, if any, alterations are determined in the reflexes. While various alterations of the tendon-jerks obtain in tumor of the cerebellum which may accord with what is found in disseminate sclerosis, the superficial reflexes prove of distinct service in differential diagnosis, for the plantar reflex commonly assumes the extensor type at an early stage of disseminate sclerosis, while it only does so as a late event in a case of tumor of the cerebellum, and is then to be ascribed to some complication rather than to the morbid condition of the cerebellum itself.

The reseveration that has had to be made in regard to the plantar reflex does not apply to the other superficial reflexes on which a diagnosis may be based, for, assuming that the local conditions of the abdominal walls be such as to permit the abdominal reflexes to be obtained, their absence may be regarded of considerable importance in diagnosis, for, while they are unaffected in cases of tumor of the cerebellum, they are absent in a large proportion of cases of disseminate sclerosis. The reflexes may thus serve to determine whether we are in the presence of an affection in which operative intervention may be expected to bring relief, or whether the morbid condition is one in which operation would not only be useless, but actually harmful.

It is impossible to leave this part of our subject without referring to the value that attaches to the extensor plantar reflex in the diagnosis between multiple peripheral nuritis, in which it is absent, and that fatal disease, subacute combined degeneration of the spinal cord, in which it is present, for, while the former condition may be expected to result in recovery under appropriate treatment, the latter runs its course

to a fatal termination with unerring certainty in most, if not in all, cases.

3. Localizing the Seat of the Morbid Process.

The abolition of the reflexes in affections of the peripheral nerves, the variety of ways in which they may be affected in diseases of the spinal cord, and their unilateral exaggeration, diminution or special modification in affections of the brain, need no more than passing notice. It is impossible, however, to leave this part of our subject without a word of comment in regard to the part the reflexes play in the early diagnosis of morbid conditions of the brain and spinal cord, for it repeatedly happens that some departure of the reflexes from the normal standard is the first indication that we have, not only that organic disease exists, but as to what part of the nervous system is affected. Special note must also be taken of the important *role* they play in the localization of focal lesions of the spinal cord, in which connection nothing is more important than the aid to be derived from them in the diagnosis and localization of tumors of the cord.

The abolition of the reflexes which correspond to certain segments of the cord, the escape of all the reflexes above this level, and other exaggeration or other modification below it, must be regarded as the most valuable indications we have in determining the position of a focal lesion.

Similarly, unilateral alteration of the reflexes may be the first indication of which hemisphere of the brain is affected, and, while it may happen that hemiplegia or some other condition makes it superfluous for us to seek assistance from the reflexes, there are cases in which there is so much uncertainty that every source from which information can be gleaned must be welcomed, and then it is that the reflexes may prove invaluable. No better example of this can be found than what obtains in tumors of the frontal lobes of the brain. The difficulties of localization in such cases may prove well-nigh insurmountable, so that unilateral exaggeration of the knee-jerk or the appearance of ankle clonus on one side is welcomed. Of similar significance is the appearance of the extensor of the plantar reflex, or, as my colleague, Dr. Grainger Stewart, has shown, diminution or abolition of the superficial abdominal reflexes on the side opposite to that on which the tumor is situated.

4. The Extent and Severity of the Mischief.

It would appear to be self-evident that, inasmuch as the various reflexes have different segments of the spinal cord on whose integrity they depend, the fewer that are lost the less extensive the lesions, and the wider the extent of their affection, but more widespread the distribution of the morbid process. It must be clearly recognized, however, that this is by no means necessarily the case, for, in reality, this only applies in some instances, for a very limited lesion may give rise to widespread alterations of the reflexes. Take, for example, a case in which the lesion is limited to the cervical region of the cord, and abolishes the scapulo-humeral and other arm reflexes. Many other reflexes will also be altered, though not necessarily abolished, so that among the abnormal phenomena to be looked for are exaggeration of the knee-jerks, ankle clonus, and the extensor type of plantar reflex.

No better example of the value of the reflexes in determining the severity of a lesion can be suggested than is supplied by the knee-jerks in cases of transverse lesions of the spinal cord above the lumbar enlargement, for when, instead of being exaggerated, they are abolished and remain absent, the gravest fears are justified. When the knee-jerks do not return there is every reason to fear a severance of the cord so complete as to preclude the possibility of re-establishment of the paths through the damaged segments of the cord. Ankle clonus, a phenomenon that we view with concern under other conditions, would now be welcomed, as this would indicate possibilities of recovery which would not have been justified had the knee and ankle-jerks remained absent.

5. Limitations to the Value of the Reflexes.

There are instances in which the reflexes only partly clear up the diagnostic problem. Take, for example, a case of myelitis with paraplegia as the result. From the reflexes alone the diagnosis may be made as to whether ordinary myelitis or polio-myelitis exists, but further than this they cannot take us. The X-rays may reveal tuberculous disease of the bone, which has not as yet produced spinal deformity, or the opsonic index may raise the suspicion of a tuberculous origin of the paraplegia in a way that is impossible to the reflexes.

Similarly, syphilitic pachymeningitis may not as yet have occasioned any alteration in the reflexes by which an organic

condition can be diagnosed, and yet lumbar puncture may permit the determination of a leucocytosis that allows a positive diagnosis to be made. Or the behavior of the superficial reflexes may justify the diagnosis of an organic hemiplegia, while it requires the ophthalmoscope to say that a tumor is responsible for it, or lumbar puncture to indicate that the thrombosis which underlies it is of syphilitic origin.

6. The Part They Play in the Diagnosis of General Diseases.

The question that next arises is as to whether the reflexes give any assistance in diagnosis in realms outside those of neurology. There can be no doubt that there are many cases in which, in the absence of any known disease of the nervous system, the reflexes are altered in the course of some general disease or special affection of some other organ of the body.

It will be remembered that in an affection like diphtheria absent knee-jerks may give the first clue to the nature of a sore throat that ought to have been long since determined by bacteriological examination of secretion from the fauces. Similarly, absence of the knee-jerks may call attention to the possibility of glycosuria, which routine examination of the urine should have forestalled.

Some attempt has been made to derive direct advantage from alterations of the reflexes as in favor of one as opposed to another disease in which the nervous system plays no part, except that the toxins of the one malady have a more profound effect on the nerve centres, and occasions alterations of the reflexes in consequence, in a manner that does not obtain in the other disease. Thus, the knee-jerks have been found absent in a large proportion of cases of pneumonia due to the diplococcus or the diphtheria organism, while they are not affected in septic pneumonia and found exaggerated in tuberculous cases (Stanley Barnes).

The chief value, however, that attaches to these observations in the present state of our knowledge is that they prevent us from concluding that some organic condition, as, for instance, myelitis or meningitis, has of necessity developed because these alterations in the reflexes are determined. Those interested in the welfare of the patient are thus spared the anxiety that would be caused by the opinion that might have been expressed in ignorance of the fact that the alterations noted are compatible with transitory effects due to toxic conditions without any permanent organic change.

THE OPSONIC TREATMENT OF DISEASES OF THE SKIN.

D. King Smith, M.B.

The object of this brief paper is not to describe the method introduced by Wright and Douglas in the treatment of bacterial infections by means of injection of appropriate vaccines, but to discuss the results of the treatment in certain diseases of the skin.

As the technique of carrying out the treatment is quite complicated, great chance for error arises, hence it is not surprising to find considerable differences of opinion regarding the results.

To arrive at a satisfactory and fair conclusion, it would not be advisable to consider the work of anyone, unless he was especially trained in the method, therefore my results are taken from reports of those who have devoted much time to this particular branch of medicine.

Probably the most brilliant results of the opsonic treatment are found in cases of furunculosis and carbuncles; all workers seem to agree on this point. Whitfield, of King's College, says, "That in his hands it has been a complete and brilliant success, that it is uniformly successful and is the only treatment for general furunculosis, which is in the slightest degree reliable." He also says, "That one or two of his patients have had a boil after the treatment has been begun, but most have had no more after the first injection."

Ross, of Toronto—in the Annual Report of Toronto General Hospital—says: "The results of treatment of boils and carbuncles have been most gratifying." Many of his cases were severe and had resisted the usal methods of treatment. Control and cure were rapidly obtained in 27 cases of the 33, and a cure was ultimately obtained in the remaining six cases.

Von Eberts, Montreal, says: "Practically all cases react favorably."

Schamberg, Philadelphia, reports cures in about 50 per cent. of his series, and says, "That the raising of the patient's defensive power against the invasion of the staphylococcus would appear to be the only scientific treatment."

In Coccogenic Sycosis the same good results have not been obtained, probably for the reason that the organism is generally shut off from the body by the epithelial barrier of the root sheath, which undoubtedly renders it more difficult of approach by the vaccine.

In this disease Whitfield says: "The treatment is a valuable aid, but must be continued for long periods in proportion to the duration of the case, and is best combined with X-ray depilation." After the first injection there is often marked improvement, but there seems to be a great tendency to recurrence.

In a number of cases reported by various workers 50 per cent. of the cases resulted practically in a cure, and a much larger percentage was improved, so that, no doubt, the treatment is of much benefit to this disease, which is so hard to overcome by ordinary methods.

In acne the treatment is very uncertain, in some cases being most useful, in others without the slightest avail. In cases of a severe type it is well worthy of a trial, and will often be of great service along with other methods.

In tubercular ulceration it is of great value, while in lupus vulgaris the treatment alone is too slow and uncertain to be recommended. It has been found valuable after Finsen's treatment in preventing relapse, and is also valuable combined with X-ray.

In reviewing the literature on this subject, the results obtained by various workers in the above diseases are wonderfully uniform, and the treatment in the hands of careful workers shows most encouraging results.

22 Wellesley Street.

Dr. W. Gibson

said: It gives me pleasure to congratulate Drs. Silcox, King Smith and Ross on their papers and results. It has been a great privilege to me to listen to them, and I am sure I shall be much benefited thereby.

In discussing these papers, I have taken the privilege of jotting down some of my grievances and a few of my troubles in applying opsonic methods to the small series of cases which have come to me for treatment by opsonic therapy.

Let me say at the outset that we have not lately made so many calculations of opsonic indices as we did in the beginning of our work along these lines—not on account of the inutility or inaccuracy of the opsonic index as a guide, but because the number of cases which have come to us for treatment have so increased as to prohibit, for lack of time, the calculation of the opsonic index at appropriate intervals in the treatment of the various cases. Hence we have to content ourselves by making one or two preliminary opsonic calculations, both in pyogenic

and tubercular infections, and then making our inoculations at weekly intervals in pyogenic infections, and in tubercular cases at ten days or two weeks' intervals.

Very often we have been compelled, on account of the obstinacy of a particular case, to resort to opsonic calculations in order to gain an idea of the proper dosage and interval, and almost invariably the opsonic index has given us the desired information. The query naturally arises, since we depend so much on the opsonic index, why do we not apply our vaccine therapy, guided at all times by opsonic calculations? Let me say to those not initiated into the mysteries of the opsonic index, that the labor involved would require the entire time of one man at least, for the treatment of rather a small number of cases (I shall not state definitely how many before skilled experts), and I have been devoting only my afternoons to this class of work. Still, we have succeeded in getting fairly satisfactory results in our work, but I firmly believe much better and more uniformly satisfactory results might be secured were the opsonic index followed throughout the entire treatment of cases.

In the beginning of our work, when opsonic indices were calculated more frequently, as we had not then so many vaccines to make, we never found such inconsistencies in our results as could not be explained by errors in technique, and this we believe in spite of adverse reports appearing in various medical journals as to the accuracy of the opsonic index in applying vaccine therapy. The preparation of the bacterial emulsions, the pipettes, the measurement of the columns of white cells, emulsion and serum, the thorough mixing of the three, before and after incubation, the making of perfect smears, and, lastly, the counting, are so replete with sources from which errors may arise that one thoroughly cognizant with the opsonic technique can easily understand how adverse reports might come. Though not used by some in counting, and at first not by us, I believe the mechanical stage to be of value both in the phagocytic and the emulsion count in the manufacture of vaccines.

As to homologous vaccines, we have used them almost entirely in our work, except, of course, in tubercular cases, in most of our carbuncle cases, and some few cases of gonococcus infections we have treated by vaccines made from two strains of gonococcus. Just in this connection, as a grievance, I might say we have had difficulty in calculating our opsonic indices in connection with gonococcus infections, both because of the difficulty

of getting a clear definition of the individual cocci and clumping. In connection with T. B., we had difficulty with clumping some of our stock emulsions particularly. I hope to gain some light on this subject while here.

Paper led by Dr. D. King Smith.

Boil cases probably form the largest number in our series of cases treated by opsonic methods, and all have closed up very rapidly. One case under treatment at present has proved rather obstinate; it is really a combination of pustular acne on the chin and face, and crop after crop of small boils on the back of the neck. The case was rather chronic, having run about a year previous to beginning vaccine therapy. The organism isolated was a pigmented coccus, the Cercus Flavus. About eight weekly inoculations have been given (not guided by the opsonic index), and when last seen there was considerable improvement.

We have had no cases of sycosis.

It has been our experience that the more severe forms of acne vulgaris give better results from this treatment than those cases of the mild type where only a few recurring pimples are complained of. Our acne vulgaris cases have been rather limited in number.

I do not know whether the other workers have used Tuberculm R. in lupus erythematosus or not, and because of the probability of its non-tubercular origin it is scarcely indicated, though it has been used. We have used it in one case with no result. Of luptus vulgaris we have had no cases for treatment.

In connection with a case of tubercular periostitis of the tibia in a patient suffering from fibroid phthisis, which was treated by T. R., two tuberculides, involving the skin just over the patella, gradually disappeared as the periostitis cleared up. This particular case has cleared up any skepticism I had as to the value of Tuberculin in localized tubercolosis, if properly applied. This case was of two years' duration, during which constitutional and local treatment was tried without result. An ulcer developing over the mass, which, by the way, was quite large and extended from the middle of the shaft of the tibia to an inch and a half above the inner malleolus, obliterating the sharp anterior and lateral borders of the tibia, the patient went to Toronto, where a skiagraph revealed that only the periosteum was involved. X-ray treatment was recommended, but the patient returned from Toronto and immediately began treatment by T. R., guided at first by the opsonic index. The inocu-

lations were made about two or three inches from the margin of the ulcer, and the patient during the treatment did her usual work, keeping the leg elevated only when resting. The ulcer began to heal immediately, and in three months it was entirely healed, while the great mass over the tibia had almost disappeared, as well as the two tuberculides. It is now five months since the treatment was begun, and the patient is still taking her tuberculin inoculations, and the leg is practically well.

Selected Article.

EXTRACTS FROM ADDRESS IN MEDICINE, DELIVERED AT THE MEETING OF THE BRITISH MEDICAL ASSOCIATION.*

By James Kingston Fowler, M.A., M.D., Hon. D.Sc., F.R.C.P.

Dean of the Faculty of Medicine, University of London, etc.

VACCINE-THERAPY.

There is, perhaps, no subject which is exciting greater interest in our profession to-day than the treatment of bacterial infections by the inoculation of vaccines.

I had lately the pleasure to hand to Sir Almroth Wright the Fothergillian Gold Medal of the Medical Society of London, which is given triennially for scientific work in connection with medicine or surgery published within a period of five years. It is fitting that a society of which Edward Jenner was a distinguished member should be the first to publicly recognize the value of the labors of one who has made the immortal discovery of Jenner the basis of his work. Whilst faddists and politicians have been, and still are, endeavoring to prevent the people of this country from rendering themselves immune to smallpox, vaccination has gradually acquired a wider and wider meaning, until now the principle underlying its action has become the basis of the most advanced medicine of to-day. Thus may science ever confound her enemies!

The claims of vaccine-therapy to acceptance as a method of general application are receiving strict examination, and such they will continue to receive, and it should be welcomed, for of it nothing but good can come.

The minds of workers in science are, however, not always more free than those of humbler folk from a certain narrowness of view and an inability to appreciate the value of the work of others, and sometimes I fancy that I can see traces of this in the warfare that is now raging over the opsonic index and protective inoculation.

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THE PROCESS OF IMMUNIZATION.

The process followed by Nature in the cure of an infectious disease, and in conferring upon the individual immunity to it in the future stands now to some extent revealed.

The first stage in this march of science ended with the proof that organisms are the cause of the infectious diseases. The second closed with the demonstration that by cultivating the bacteria under artificial conditions their pathogenic virulence can be greatly reduced, and that whilst an animal can be killed with a very small dose of the organism freshly isolated, a similar or larger dose of the attenuated virus will produce only a slight illness.

The third stage toward the desired goal was reached when it was shown that the animal thereafter was protected against repeated doses of the actively virulent culture of the organism, and that the artificial production of immunity had been attained. Up to this point there is no difference of opinion, but beyond it rival theories contend for mastery.

Are the leucocytes the sole active agents in the destruction of the infecting organisms? Is immunity brought about by phagocytosis, or are the bacteria first killed or their vitality seriously lowered by soluble constituents of the blood serum, the leucocytes acting either as scavengers or disposing of the bacteria already devitalized by the serum?

The weight of opinion appears to me to be overwhelming in favor of the view that agents other than the leucocytes play the more important part in this process. Some of these substances are present in the blood serum of a normal animal that has been submitted to no immunizing process; others appear in the blood as the result of infection, whether occurring in the ordinary manner or induced in the process of artificial immunization by bacterial vaccination. The bacteriolysins are substances which dissolve micro-organisms; the agglutinins cause bacteria to swell up, to lose their motility, and finally to aggregate in clumps. The opsonins discovered by Sir Almroth Wright and Douglas are substances which do not kill the invading bacteria, but produce in them a chemical change of such a nature that they are rendered susceptible to the phagocytic power of the leucocytes. Whether these bodies are distinct from or identical with that which appears in the blood as the result of infection or immunization is a question which must be left for the decision of those who are specially engaged in bacteriological research.

THE RESULTS OF VACCINE-THERAPY.

As to the great advance which the introduction of vaccine-therapy marks in the treatment of the infectious diseases, there can, I think, be little room for doubt. Sir Almroth Wright and his co-workers have established very clearly that in a variety of localized bacterial infections in which the staphylococci are the causative agents, for example, general furunculosis, suppurating acne and sycosis, it is possible by the use of a standardized emulsion of the dead micro-organism either to cure or favorably influence the course of the disease.

Also that in many localized and chronic infections of streptococcal origin, especially when a vaccine derived from the patient's own particular strain of organism can be procured, a like favorable result may be obtained.

Where, however, this is not possible, and a so-called polyvalent market vaccine is employed, the result is frequently disappointing; an experience not limited to the use of stock vaccines of this kind only. A polyvalent antistreptococcal vaccine, it is to be remembered, is made by the use of *Streptococcus pyogenes* obtained from various sources, not from streptococci of known difference in reaction.

Moreover, in certain generalized streptococcal infections, both acute and chronic, the treatment by specific inoculation has given results which hold out promise of great possibilities in the near future. The majority of these latter affections occur in surgical practice with which we are not now so closely concerned, but in the treatment of the diseases of the heart we may ultimately possess an effective remedy for malignant endocarditis, which has, as its name implies, been regarded hitherto as a necessarily fatal malady.

A variety of local infections of the kidneys, the bladder, the colon and other organs in which the *Bacillus coli* is the infecting agent can now be successfully treated by the use of a bacterial vaccine, and it is satisfactory to learn that the method of protective inoculation against typhoid fever which Sir Almroth Wright introduced has been extensively used in the British army, the German army, and the Indian Civil Service, and that Lord Kitchener has expressed an opinion that all soldiers before proceeding to India should be submitted to this treatment.

Perhaps the greatest degree of interest attending the employment of a bacterial vaccine centres at the present moment around its use in pulmonary tuberculosis. That the new

tuberculin is a remedy of value in the treatment of lupus, of tuberculous arthritis and of various other localized tuberculous affections has, I think, been abundantly proved. Before considering its use in pulmonary tuberculosis it will be necessary to discuss the question of the opsonic index and the theory of auto-inoculation.

THE THEORY OF AUTO-INOCULATION.

Let us now consider briefly the theory of auto-inoculation, which also has been evolved from a study of the opsonic index.

The theory is that from a focus of infection within the body a process of auto-inoculation may be in operation, and that many of the phenomena indicating recurrent activity of the organism are best explained by assuming that at intervals the patient is spontaneously inoculating himself with a varying dose of the virus of his disease. This theory took its origin from the investigations of Freeman on the effect of massage on joints affected with gonococcal arthritis. He showed that any movements, passive or active, which are sufficient to affect a focus of infection result in a discharge of poison into the system, and that the discharge produces the same effect on the blood measured by variations in the opsonic index as an artificial inoculation.

In a case of pulmonary tuberculosis with a lesion which is neither arrested nor quiescent, exercise beyond a certain moderate degree almost invariably causes some amount of pyrexia, either temporary or permanent. The theory of auto-inoculation explains the fact which I have observed, that in nearly all the cases in which arrest obtained by sanatorium treatment has been followed by relapse, this has been due to over-exertion in sport or games and not to the effects of work. The importance of rest as the main factor in the treatment of the fever of the disease has long been appreciated. Have we not now an explanation of this and a proof of the accuracy of our clinical observations?

THE STUDENT OF THE FUTURE AND THE UNIVERSITIES.

What of the student of the future? I think we may confidently conclude that he will in larger and ever-increasing numbers resort to the universities for the preliminary and intermediate subjects of his education, and that the medical schools will become, as in my opinion they should be, clinical

schools, limiting their sphere to the teaching of those subjects of the curriculum which must necessarily be studied in connection with a hospital.

These subjects are undergoing, and will continue to undergo, such an enormous expansion that the schools, even when they restrict their energies to the task, will find it year by year more difficult to teach the whole of them satisfactorily.

Medical education is a form of technical education in the efficiency of which the public, if they only realized it, are interested as much if not more than in many others to which public money is given, inadequately it is true, but without hesitation.

In the future, endowment and the financial support of public bodies will only be given to the universities, and nothing can be more shortsighted than to exclude our students from the benefits enjoyed by those in other faculties.

THE PRACTITIONER OF THE FUTURE.

In time the student becomes a practitioner. What advice shall we offer him at the outset of his career? To maintain the high traditions of unselfish devotion to duty which have characterized the profession in the past; to be guided in all the difficulties which he will meet by the simple rule to act as a gentleman; to cultivate a cheerful and hopeful disposition, and to keep an open mind. In the latter lies the secret of perpetual youth. Sir Andrew Clark, whom to know well was to love much, was fond of saying that "No man is old until he ceases to be able to adapt himself to his environment. When I go into the country," he said, "and meet a practitioner who talks about those damned microbes, I know he is old. It does not matter what his age may be." But how will the practitioner fare for a livelihood in the future if the ever-increasing tendency of the people to expect gratuitous medical attendance continues unchecked, and neither political party considers it to be its duty to encourage habits of thrift amongst the working population?

THE PHYSICIAN OF THE FUTURE.

Let us now pass on to consider the physician of the future. Sir Almroth Wright is of opinion that he will be an immunizator. We shall all agree in hoping that it may be in his power to afford immunity to his patients from as many

diseases as possible, and we shall also agree that as a student and subsequently, he must have received a careful and prolonged laboratory training. But I submit that he must continue to be in the future, as he has been in the past, above all things a man of wide clinical experience. No matter how great the advance of science may be in the future, there will never be a royal road to medicine; it will be the common road that all must tread who aspire to treat disease, and, after the class-room has been left behind, it will lie through the wards of the hospital, the *post-mortem* room and the clinical laboratory, and will always lead back to the bedside. The physician of the future will have to deal with human nature as we have had to deal with it. Times may change, ideals may alter, but water and human nature will ever remain weak. They are the only two things in this world on which it is safe to stake one's last shilling. It used to be thought that there was a third—namely, beer—but recent events have shattered that opinion.

In the future, as in the past, the first and most important thing will be the diagnosis of the patient's malady. Once that has been accurately determined, the rest is comparatively easy. I lose no opportunity of impressing on students that the one thing that cannot be read up is "diagnosis"; that must be learned at the bedside. Some may think that as medicine becomes more and more firmly fixed upon a sure basis of science the diagnosis of disease will gradually prove an easier task. It will become more certain in competent hands, but it will never be easy, for, as science grows it will continually place new burdens upon the physician and the practitioner. I have had many opportunities of observing that the recent increase in the number of laboratory tests available is surely leading to the disuse of the older methods of investigation—the employment, that is, of all the senses with which Nature has provided us; and it is a physiological law that atrophy follows disuse.

It must have occurred to every physician to be called to a case in which the condition of the blood and of every secretion that lends itself to examination had been carefully investigated, not once only, but several times, and yet the diagnosis was as far, if not further, off than ever; whereas, an intelligent use of the old-fashioned methods of inspection, palpation, percussion, and auscultation, showed that it was literally staring one in the face.

In so saying, I shall not, I trust, be thought to undervalue the very great assistance given to diagnosis by the newer methods. I am only urging that the older should not be allowed to fall into disuse.

The bacteriologist, in some at least of the general hospitals, is now regarded as the servant of the physician, who orders that certain investigations shall be undertaken. This is not, I submit, the position to which he is entitled. In important cases in which his advice and assistance are required, he should consult on equal terms with the physician at the bedside, and the investigations to be made or the treatment to be adopted should be the joint result of their deliberations. If they differ, the view of the senior partner should prevail. The future will determine for itself whether, or to what extent, these two individuals should be united, but it is clear that in the transition period to which we belong they must act together, as each is the necessary complement of the other. That any person professing ignorance of clinical medicine should independently attempt to treat disease is a position so unsound that it needs but to be stated to be condemned.

Meeting of Medical Societies.

AMERICAN PROCTOLOGIC SOCIETY.

Tenth annual meeting, held at Chicago, Ill., June 1st and 2nd, 1908. The President, Dr. A. Bennett Cooke, in the chair.

Officers elected: President, Geo. B. Evans, M.D.; Vice-President, John L. Jelks, M.D.; Sec.-Treas., Lewis H. Adler, jr., M.D.

The place of meeting for 1909 is Atlantic City, N.J., May 31st and June 1, 1909.

The following is an abstract of the principal papers read:

President's Address.

The President, Dr. A. Bennett Cooke, of Nashville, Tenn., showed some of the results which had been accomplished in the ten years of the Society's existence, chief among which was emphasized the assured position as a legitimate, dignified and important specialty which is now universally accorded to proctology. "Ten years ago special instruction in this branch, with a few exceptions, was only to be had in the post-graduate institutions of the larger centres. To-day the curriculum of any medical college which does not include a course on proctology is rightly considered to that extent defective and behind the times. The benefit of this new order of things to the public cannot be estimated."

"The Treatment of Choice of Stricture of the Rectum"

Was the title of a paper by Wm. M. Beach, A.M., M.D., of Pittsburg, Pa., who stated that in his early proctologic experience he became an enthusiast on this or that method of treatment only to be disappointed by a recurrence of the ailment. All the classical recommendations were tried, namely gradual dilatation, proctotomy internal and external, excision, and a few other technical schemes, ideal but not practical. Each promised favorable results for a time but experience taught him that instead of cure the condition uniformly became worse.

In order to answer the query, what is the choice of treatment? It is important to consider first, the history of syphilitic stricture, and second, the location and form of stricture to determine the degree of obstipation, third, the effect of a rectal stricture is to induce obstipation and extreme dilatation of the colon. Moreover, immediately above the various constrictions are found the active ulcerations, the source of profuse discharges of pus, blood and mucous. Among other symptoms may be found colicky pains in abdomen, distension of abdomen, backache, aching down the legs, loss of flesh, and withal a general anxiety and neurasthenia.

Regarding the treatment it is apparent that if the disease was seen early much could be done to avoid disastrous consequences, but as the disease is so insidious in onset and development, by virtue of the fact that the trouble is usually located in painless area, and that nothing short of obstipation drives the patient to seek advice, it is obvious that palliative treatment only increases the irritation, and produces a greater degree of stricture. For this reason the injections of fluids is needed only for cleansing purposes and such procedures as gradual dilatation by the passage of bougies, forcible divulsion, proctotomy, and even excision are only temporary.

For these reasons the author concludes that a permanent colostomy is the preferable plan, as this procedure admits of direct irrigation of the rectal cavity. The administration of strontium iodide in ascending doses for interrupted periods the writer believes is of extreme value, but he states that he has never been able to destroy the syphiloma with its use.

Irrigation should be used daily for the first month and less frequently thereafter. For this purpose normal solutions should be used of salines, alternating with solutions of one to one-thousand permanganate of potash, or nitrate of silver twenty grains to the quart, or of ichthyol a drachm to the quart. Boracic acid solutions are often beneficial.

Defecation through a properly constructed inguinal anus is completely painless, and under reasonable control. The patient soon becomes reconciliated to his condition and rapidly improves in health.

The author from his experience concludes his paper with the following remarks:

1. Syphilitic stricture of the rectum is believed to be the result of badly treated cases of syphilis in the early stages.

2. It is more frequently found in the female, for the reason that the primary lesions are more apt to be overlooked.

3. Direct surgical attack of rectal syphiloma does not insure permanent relief, but rather aggravates the condition.

4. Specific constitutional treatment should be instituted, with the hope of making a favorable impression upon the diseased tissue.

5. Permanent colostomy is the treatment of choice for the purpose of irrigation and restoration of bowel functions.

"Amebiasis, its Symptomatology, Diagnosis, Sequelae and the Use of Formalin and Copper Phenol Sulphonate in the Treatment."

By Dr. John L. Jelks, Memphis, Tenn.

who called attention to the great prevalence of this disease in the South.

Marked differences have been ascribed to the ameba, as to its character and actions in different cases, especially with reference to its phagositic properties and its motility. The author referred to associated infection as playing an important role in many cases, and attributes to this mixed infection the difference in character of ulceration in the higher parts of the colon, and that in the rectum.

Cases of amebiasis are referred to as occurring in nests, in the low marshy districts, in the sparsely settled alluvial sections, and in the suburban mill districts of the city. None of the cases in the city were residents of the highland portion, and all of them partook of fresh vegetables which were grown in the bottoms and washed with water from shallow wells.

The author viewed with suspicion all cases of violent, acute dysentery or chronic diarrhea with mucous discharge.

In the majority of cases the patient complains of, and the predominant symptom in chronic cases is that of, recurring diarrhea, which has existed for several months or years, associated with a quantity of mucus, and occasionally blood stained. Sometimes large casts of mucosa are expelled, as also casts of mucous and fibrin.

In the treatment, the author first referred to the importance of selecting a proper diet for these cases, and then referred to the use of formalin and boracic acid solution, and formalin and copper phenol-sulphonate solution in high irrigations through a recurrent tube which he has devised specially for

that purpose. He also referred to treatments through the sigmoidoscope with silver nitrate followed by the installation of boracic acid and aristol, or iodoform and bismuth subnitrate and olive oil.

The author concluded that the washing away of necrotic material and debris, as also the infecting agents, is an important matter in the treatment of these cases, and stated that these stimulate the vaso-motor supply, relieve passive congestion and stasis, increase the amount of flesh blood to the inflamed structures, and perhaps aid in the development of antitoxic bodies.

"Some Recent Contributions to the Physiology of the Rectum."

By Dr. Samuel T. Earle, Jr., of Baltimore, Md.,

who stated that the properties of the external sphincter resemble those of plain muscle; that the anus closes by permanent tonus of the two sphincters independent of the will, but is supplemented by it for voluntary control, that the tonus practically disappears after section of the nervi erigentes, proving thereby that the closure depends upon the constant expenditure of nervous energy, and not upon the elasticity of the muscle and the arrangement of its fibres.

That there are constrictor and dilator fibres to the internal sphincter which can be stimulated reflexly through the spinal cord, proving a reflex centre in the lower portion of the cord; that through this centre, either reflexly or voluntarily, the internal sphincter can be dilated or constricted and the external sphincter can be inhibited.

"Plate with False Teeth in Sigmoid."

Report of a Case by Dr. Samuel T. Earle, Jr., Baltimore, Md.

Mrs. F. H. D., the latter part of August, 1907, while eating ham, swallowed a plate with two false teeth. Ten days later she had a violent attack of pain in the abdomen, followed by a chill and fever; there was no recurrence of this for one and a half months. Since then they have recurred from time to time, but not as severe, nor have they been attended with chill and fever. A skiagraph taken of the lower abdominal and pelvic regions showed the plate in the sigmoid flexure of the colon, on a level with the promontory of the sacrum. Examination through the sigmoidoscope brought them into view

at the point shown by the X-ray. There was considerable tenesmus, and the passage of a good deal of mucus, also a tendency to constipation. Under the influence of two hypodermics of morphine gr. 1-4, hyoscin hydrobromate gr. 1-100, and cactina which produced satisfactory anesthesia, Dr. Earle was able to grasp the plate, through the sigmoidoscope, with a pair of long alligator forceps, and withdraw it immediately behind the sigmoidoscope.

"Galvanic Electricity in the Treatment of Hemorrhoids, Fissure, Prolapse, Ulceration and Non-Malignant Stricture of the Rectum."

By Dr. Wm. L. Dickinson, Saginaw, Mich.

Who stated that he did not claim that this is *par excellence* the treatment for each and every case of hemorrhoids, fissure, prolapse, ulceration and non-malignant stricture of the rectum, but that in suitable cases, and also where from fear, physical conditions, or other reasons, the patient refuses to submit to surgical measures, the method had proven its utility.

In the use of galvanism, sight should not be lost of the different properties of the two poles, remembering that we always have physical and therapeutical properties peculiar to each pole, and exactly opposite in effect. The positive pole produces oxygen, is acid, hemostatic, sedative, contracts and hardens tissue, is an acid caustic, and produces hard, firm cicatrices, is also a vaso-constrictor. While the negative pole produces hydrogen, is alkaline, dilates blood-vessels, thus increases bleeding, causes hyper-sensitiveness, liquifies and disintegrates tissue; being an alkaline caustic, the resulting cicatrices are soft and yielding; it is also a vaso-dilator.

Internal hemorrhoids are successfully treated with the electric needle, as follows: Cocanize the hemorrhoid, then introduce a platinum or common cambric needle into it, attached to the positive pole, while the negative pole is connected with a large abdominal pad. Use a current strength of fifteen milleamperes for fifteen or twenty minutes, or until the hemorrhoid is rendered hard and unyielding. Best to treat one hemorrhoid at a time.

Anal fissure should be cocanized, then a copper probe attached to the positive pole should be applied until a pronounced deposit of the oxychloride of copper salt is obtained. There will be considerable soreness for a few days, but the patient

is always greatly benefited by the first treatment if not cured by it, and is always cured by five or six treatments.

Where the edges of a fissure are greatly hypertrophied the negative pole should be applied to cause liquifaction of the dense tissues.

In cases of prolapse where the redundancy of the rectal wall is of moderate degree, galvanism is of marked benefit, an electrode attached to the positive pole should be introduced into the rectum and a current of fifteen to twenty-five milleamperes used daily for ten or fifteen minutes.

"Dysentery."

By Dr. J. M. Mathews, Louisville, Ky.

who reported a case of amebic dysentery in a man, 45 years of age, who had never been farther south than Louisville, Ky. He had been treated for ten years for a diarrhea which entirely disappeared at times, but in the course of a few months it would reappear. A proctoscopic examination was made and an ulcerated condition of the entire rectum and lower half of sigmoid was observed. A number of the ulcers were curetted and a microscopic examination made. No amebæ were present. Ulcers were all healed and patient well in three and a half months. In about ten months patient returned to the office, and was found to be in about the same condition as before. Another scraping was done and a microscopic examination made. Numerous amebæ were present.

Patient being a wholesale fruit dealer had handled and eaten raw tropical fruits for more than twenty years. There is no doubt about his infection occurring in this way.

Position for Examination, Treatment, Etc.—About three years ago Dr. Mathews' partner, Dr. G. S. Hanes, in treating a difficult case, discovered a position that has been employed ever since where the proctoscope is used. The patient is placed in an absolute inverted position, hanging over the edge of a table or chair on the thighs, with one shoulder supported on a chair of sufficient height. The opposite hand is supported upon the floor or two chairs can be used, one for each shoulder, the head passing down between them.

A special table for this position is in course of construction.

When the patient is in this position the entire weight of the abdominal viscera falls upon the diaphragm which pulls upon the sigmoid and rectum and brings them more nearly in the

direction of a straight line. Atmospheric pressure completely distends the rectum and lower portion of sigmoid in most cases. A complete view of these parts can be had by the use of a reflected light. The discomfort to the patient of distending the bowel by forcing air into it is never necessary except in high examinations. The surgeon, is in a comfortable position, standing by the patient, and looking down into the bowel. An enema can be given easily in this position, and you know the solution passes up into the sigmoid and colon. It affords many advantages over other positions.

"The Choice of an Anesthetic in Rectal Surgery."

By Dr. Jerome M. Lynch, of New York City.

It is important that some method of shortening the anesthesia be employed; that the intake of chloroform or ether be lessened by giving the patient some less objectional or less toxic drug, or by some preceding anesthetic less hazardous.

Morphine and hyoscine, either as a substitute or preliminary to general anesthesia, have been used successfully in some seventy-five cases. At the New York Polyclinic, St. Bartholomew's, and in private practice, considerable experience has been had with ethyl chloride, and it has been used now in over six hundred cases, as a general anesthesia for short operations and examinations or as a preliminary anesthetic to chloroform or ether, without a single accident or bad result.

The author was the first to advocate the drop method in the use of ethyl chloride. He found that by this method the drug could be used more intelligently and that much less of the anaesthetic was required. Another advantage in this procedure is that it does not crystallize all over the mask as it does in the spray method.

The author did not advocate this anesthetic to the exclusion of ether or chloroform; but held that for examinations, short operations, as a preliminary to ether or chloroform. and as an adjuvant to hyoscine and morphine, it is safer and more efficacious than any anesthetic we use to-day. He was decidedly opposed to any form of closed inhaler. To the open method must be attributed the good results with ethyl chloride. He did not find ethyl chloride, however, suitable for any anesthesia which lasts over ten minutes, as vomiting is apt to follow a prolonged use of this drug. It is also contra-indicated in alcoholics, children with adenoids, patients suffering from

acutely inflamed conditions of the throat, or advanced cardiac disease. Spasms of the larynx has occurred in some 5 per cent. of the cases; but this is at once relieved by withdrawing the anesthetic, or by substituting a few drops of chloroform.

Another anesthetic that has been overlooked, and one that is particularly safe, is nitrous oxide, alone, or with oxygen.

"Surgery of Specific Diseases of the Rectum."

By Dr. Geo. B. Evans, Dayton, Ohio.

who said that venereal diseases of the rectum constitute maladies which have neither been mastered by the syphilographer nor the proctologist. The former is not familiar with the armamentarium for rectal exploration, and the latter is not thoroughly familiar with venereal diseases. The manifestations of syphilis escape the former because they are often removed from the field of vision, while the attention of the latter is called to the fact because pain exists in the rectum. The following conclusions were formulated: That rectal stricture may follow chancroidal infection by virtue of its pathology, which may be the result of absorption or lodgment of infectious matter on mucous membrane, or in submucous, or even perirectal tissue, and that rectal strictures may be but a latent manifestation of syphilitic infection. That this belief is in accord with the author's experience, and is the reasonable deduction from the experience of other competent observers. Moreover, that while iodides are usually prescribed in these conditions, they are not of curative value, and that it is only by incision and internal mechanical dilatation that these strictures of specific nature can be made tolerable.

(*To be continued.*)

Editorials.

THE UNIVERSITY AND THE MEDICAL COUNCIL.

At the last meeting of the Alumni of the University of Toronto, the retiring President made some references to the relationship of the University and the Medical Council.

As there has been much misconception respecting his utterances on account of the inadequate newspaper reports, we desire now to publish Professor Cameron's remarks:

"The Medical Council of Ontario is the only one of the Provincial Councils which has not entered into reciprocity with the General Medical Council of Great Britain in the matter of registration, and the fact of this medical degree of the University of Toronto has been prophetically announced in the statements recently published in the daily papers that the Provincial Medical Council of Quebec has at length accepted the scheme of reciprocity within the Empire. The medical degrees of the University of Laval and McGill University are registrable upon presentation in the Province of Quebec, and the holders become thereby entitled to the license of practice. Now that reciprocal registration between the Councils of Great Britain and Quebec has been adopted, the medical graduates of Laval and of McGill are admissible to the registry of Great Britain, and so the portals of the public service of the empire (which is a vital and important point) are open to them likewise. But not so to the graduates of the University of Toronto, who cannot practice itself in their own province without undergoing a further examination. The remedy suggested is one which has been broached several times before, and one which has withstood the test of practical experience in the Old Country. It is a simple one, and consists merely in inducing the Medical Council of Ontario (or of Great Britain for that matter) to send assessors to the examinations (and the assessors if they chose might be invited to take an active part in the examination) and upon their

report the approved candidates might be admitted to registration. . . . But in addition to this it would be still necessary to the Medical Council to secure reciprocity in registration with Great Britain in order that our graduates might stand upon the parity in the Old World with the councils of McGill and of Laval, and here it may be necessary to invoke or aid in convincing the members of the Medical Council resident throughout Ontario of the wisdom and the justice of this proceeding."

And to Dr. Daniel McAllister, President of the University of Glasgow, and President of the General Medical Council of Great Britain, Canadian graduates are deeply indebted for his strenuous and untiring efforts to make this possible.

THE INTERNATIONAL CONGRESS OF TUBERCULOSIS.

The International Congress of Tuberculosis will be held in Washington from September 21st to October 12th.

Dr. A. Jacobi, President of the fourth section of this Congress, in writing to the New York Medical Journal, calls attention to the fact, "that with the exception of those of 1876 and 1887 this will be the first great International Medical Congress held on this continent. Europeans who have been taught to expect great things from America are looking forward to the congress of 1908 as an event of the first magnitude. Its objects are the study, prevention and eradication of tuberculosis, the most formidable enemy of mankind, sapping its vigor and endangering its future."

Dr. Jno. S. Fulton is Secretary-General, 704 Colorado Building, Washington, D.C. The membership fee, including admission, and a copy of the transactions of the Congress, is placed at $5.00.

We have just received an intimation from Dr. Maginn, Secretary General, Paris, that the President of the French Committee, Prof. Landouzy, Dean of the Medical Faculty, Paris,

with Prof. Triboulet and a distinguished body of savants, will probably visit Toronto en route to the Congress.

Among the probable visitors are Prof. Calmette, Director of the Pasteur Institute at Lille; Prof. Arloing, of Lyons; Prof. Courmont, of Lyons; Prof. Tissier, of Paris; Prof. Crespin, of Algiers; Mlle. Chaptal, philanthropist, of Paris; M. Lenne, of Paris; Viot Bey, of Cairo; Dr. de Fournier, of Paris; Dr. Leon Bernard, of Paris; M. Augustin Rey, of Paris, and others.

THE BRITISH MEDICAL ASSOCIATION.

The seventy-sixth annual meeting of the British Medical Association was held in Sheffield, July 28 to 31 inclusive.

The retiring President, Dr. Davy, when inditing the president-elect, Mr. Simeon Snell, spoke of him as one who "played the game." Mr. Snell, in his presidential address, stated that this was the third annual meeting of the Association held in that city. The first meeting was held in 1845 and the second in 1876. When the first meeting was held the Association numbered less than 1,900; at the second meeting it numbered 7,000, and at the present time it numbers more than 22,000, and is the greatest Association the members of any profession have ever seen. Its far-reaching character is such that it is limited only by the confines of the British Empire, serving not only as a bond between medical brethren in different parts but as a link in the chain of imperial unity.

The British Medical Journal tells us that everything at Sheffield worked with the greatest smoothness, and the meeting from the time of its commencement with the representative meeting, July 24, up to the end, was one of the most successful on record. The new and compact university buildings were admirably adapted for the purposes of the different sections, practically each section had a room in the main building specially designed for the deliverance of lectures and the like. On the social side Sheffield nobly upheld the reputation of Yorkshire for hospitality.

THE DIRTY CUFF.

The *London Lancet*, in a recent issue, discusses the important question of the dirty cuff. It tells us that the shirt cuff, as it rubs against the counter or the desk or table picks up a multitude of micro-organisms. The journal, of course, does not pretend that such a statement is nothing more than the ordinary universal recognized trueism.

The main desire, however, of the writer appears to be to show that colored shirts are worn chiefly by persons who seek to conceal the soiled state of the shirt. Is not this rather a singular reflection on many who during the hot months are fond of wearing that very comfortable garment known as the neglige short. Of course the reason why so many are fond of the colored shirt is the desire to be relieved of the heat and stuffiness of the starched shirt bosom.

The *New York Medical Journal,* in commenting on this subject, expresses a very sensible wish that men would go a little further, and refuse to wear the starched collar, that most uncomfortable of articles for hot weather. We cannot speak quite so positively about the Englishmen residing in their native land, but we are certain that many of the cleanest Englishmen who reside in Canada are fond of the unstarched fronts during our "dog days." We might with truth make the same statement concerning a large proportion of our Canadian physicians.

PASTEUR AND LISTER.

We publish in this issue portions of Dr. Fowler's admirable "Address in Medicine," delivered before the British Medical Association. The following extract is so interesting, especially to Canadians, that we desire to give it special prominence:

"Amongst the many to whom those victories have been due the name of Pasteur stands pre-eminent. Those who have

not read his life by Vallery-Radot have missed the most inspiring work of our time. What a record of simple faith, of patient labor, of scientific insight, and great achievement! As one reads of the opposition which he encountered, and which he was so frequently compelled to turn aside to meet, one grudges every moment of the time lost in strife with men who were unable to appreciate his greatness. But we need not waste our indignation upon his compatriots, for there were not a few in this country who were no less ungenerous to his great disciple, Lister, to whom mankind is so deeply indebted, and to whom now all are mindful of what they owe.

"The seal has lately been placed upon the bond which unites two races under one flag on the Plains of Abraham; not far distant stands the single monument to Wolfe and Montcalm, leaders of opposing armies in life, but united in death.

"Let us on this side of the Atlantic not be behindhand in setting up a memorial which will serve as a record to posterity of the friendship which, originating on the Throne of England, spread over two great nations and helped to preserve the peace of the world, let us hope, *in saecula saeculorum*. What memorial could Science and Medicine desire better than that Pasteur and Lister should stand in marble side by side in the entrance hall of the University of London, of which Lord Lister is the greatest living graduate?"

THE USE OF TOBACCO.

Tobacco is said by some to be a poison, but the late Professor Croft, who was an inveterate smoker, used to tell his classes that he could assure them it was certainly a very slow poison. On the other hand, many tell us that tobacco when used in moderation is not a poison, but an actual benefit to the human system. Nobody has been able to tell us in a definite or scientific way how smoking tobacco can produce beneficial results.

American Medicine, in editorial comment, tells us that the real use of tobacco has in some obscure way a sedative effect upon the nervous system, particularly the higher cerebral cells, but at the same time the effect of excessive indulgence causes the condition bordering on delirium. Mankind has instinctively found that it is comforting in some way which no one can describe, and (latter days) womankind is discovering the same effect.

We are told that an army deprived of tobacco is so inefficient that it may become demoralized and almost unfit for active service. Perhaps the most important fact from a medical standpoint is that the excessive use of tobacco is injurious, especially, so far as it effects the digestive and the nervous systems. We can, however, lay down no fixed rules of use to individuals. The amount of tobacco which produces solace and comfort and perhaps something more in a beneficial way will frequently produce well defined symptoms of poison in another individual, such conditions as the smoker's throat and smoker's heart, etc., are serious. The physician and patient should both realize these facts and act according to the dictates of common sense and under such circumstances moderation or abstinence is desirable.

CARLSBAD.

Carlsbad is a station on the Northwestern Railway of Bohemia, distant from Berlin about 9 hours, from Bremen 17, from Dresden 5, and from Paris 22. It is situated in the eastern portion of the Austrian Empire in Bohemia. We visited there during the month of May. It is most charmingly located in a valley surrounded by high hills which are covered with a growth of fir, pine, oak and beech trees, and are remarkable for the varied and picturesque views which they present. The town proper rises on both banks of the Tepl stream, and has a population of about 15,000 resident

inhabitants. The number of patients visiting for the use of waters amounts to over 60,000 annually. The authentic history of this town begins in the 14th century, and both legend and history agree in naming Charles IV. of Austria as the founder of this most noted watering-place. The regular season opens on the 1st of May, and lasts until the end of September, but as the flow of waters continue throughout the year, and their medicinal effects and analysis do not vary, many visitors are found here at all seasons.

Anyone remaining in Carlsbad more than a week is obliged to pay what is known as the "cure" tax, which varies according to the class, from 8 to 20 crowns. To all graduated physicians, their wives and children, however, are extended the courtesies without payment, including a music tax which varies from 10 to 34 crowns; and the music at Carlsbad is wonderful indeed, there is scarcely a piece of classical music of recognized merit which does not figure on the programme at some concert during the season. The principal concerts are held in the "Stadtpark" and at "Pupp's Garden" during the day and evening, while the town band plays at the Sprudel and Muelhbrunn Colonnades every morning from six until eight, the usual hours of drinking in Carlsbad.

Of hotels there are plenty of all kinds and descriptions, for one dollar a day or even less accommodation can be secured, but the noted, largest and most comfortable hotel is Pupp's establishment. Those who wish to have the better class of accommodation during the heighth of the season, in July and August, would do well to write in advance, and the strangers visiting there should be careful not to be entrapped on arriving at the station by "touts," who invariably say that all the available lodging space has been taken up, but for a consideration they will find a room for the night, and if the visitor discovers that the apartment is not to his liking, and gives immediate notice of his desire to vacate, he will find himself required by the law to pay a full week's rent.

The first official Visitors' List dates from the year 1756. Some of the most noted names in the world's history are

found in this list. Kings, queens, diplomats, noted physicians, artists, statesmen and poets. It is reported that Goethe spent fourteen seasons here; that Beethoven conducted concerts, and that Schiller lived his three weeks honeymoon at Carlsbad.

The first analysis of the water was made in 1787, and subsequent analyses show that the waters have remained unchanged in both their qualitative and quantitative composition. The Carlsbad treatment is a combination of internal and external use of the thermal waters supported by the diet designed to assist the effect of the waters, and the individuality of the patient being fully taken into account.

Baths can be taken in the bathing establishments belonging to the town, which are fitted up with comfort and convenience. Here are to be had mineral water baths, mud baths, vapor baths, electric baths, carbonic acid baths in addition to massage and the Swedish medical gymnastics, Prof. Zander's method.

Much has been said of the modern diet of Carlsbad, and the physician consulted prescribes the "Carlsbad-Kur," with the proper diet. As a rule patients are advised to retire between the hours of nine and ten o'clock, and rise at six in the morning, in order that they may be at the springs to drink their full quota of water, usually three glasses before eight o'clock. Three-quarters of an hour after the last hot dose is taken, it is interesting to watch the crowd of visitors disappear one by one from the long promenade in the colonnades to the numerous bakery shops on the Alte Weise, where they select according to instructions rolls, cakes, brown bread, gluten bread, home-made bread or zwiebach, and march off with their little bags to the hotels, or up the hill under the trees, where they may order coffee, milk, chocolate, an omelette or cold ham and eggs. But after partaking of the three drinks and a light breakfast, it is well for visitors not to stray too far afield, but to be near the comforts of home, for the waters are active and the calls are urgent.

Great moderation is advised by the resident physicians for the noon-day meal. Fish, eggs, light meats, vegetables,

macaroni, milk, rice and mace are very much in evidence on the bills of fare.

We spent truly a delightful week in Carlsbad, and particularly enjoyed the drives through the surrounding hills, one being to Geisshubler, eight miles from Carlsbad where the Mattoni Springs are situated, and we have to thank Dr. Arnold Lorand for the courtesy extended, and for many kindnesses shown to us in Carlsbad through his influence and consideration.

W. H. B. Aikins.

Personals.

Dr. W. H. Carveth has removed from Toronto to Powassan.

Dr. Edmund E. King has returned to Toronto and resumed practice.

Dr. T. H. Whitlaw has been appointed Medical Health Officer of Edmonton.

Dr. R. D. Allway left Canada some months ago, and is now practising in Graceville, Minn.

Dr. J. M. Jory, of St. Catharines, has been appointed Coroner for the County of Lincoln.

Dr. D. A. Sinclair, of Milburn, has been appointed Coroner for the County of Middlesex.

Dr. Jno. Caven, after spending part of the summer on the Georgian Bay, returned to Toronto, August 2nd.

Dr. Chas. O'Reilly, of Toronto, sailed from Montreal for Liverpool, August 8th. After visiting London and Dublin he will return to Canada early in October.

Dr. W. A. Young entertained a number of medical men at dinner at the Yacht Club, to meet their old friend Dr. Jno. Leaming, who has made a conspicuous professional success in Chicago.

Dr. W. P. Caven, of Toronto, returned from England, and spent the month of August partly in Stoney Lake and partly in Muskoka. His friends will be glad to learn that he has quite recovered from his serious illness of last winter and spring.

Drs. Bruce Smith and J. N. E. Brown, of Toronto, after spending a couple of weeks in London studying hospital construction and hospital administration, left the metropolis July 22nd to visit some of the newer hospitals in provincial towns.

Professor Landouzy, who is expected to visit Toronto this month, was born at Rheims in 1845. His grandfather was a physician of that town. He went to Paris in 1867, was Hospital Intern in 1870, appointed assistant Professor in 1879, Physician to the Lænnec Hospital in 1890. In 1893 the distinguished professor obtained the Chair of Therapeutics in the Faculty of

Medicine, and a year later was elected a member of the Academy of Medicine. His contributions to the medical press, his clear sightedness, originality and patient research have brought him into great prominence. He is one of the directors of the *Presse Medicale* and the *Review de Medicine,* and an officer of the Legion of Honor.

Marriages.

Dr. J. H. Lowe, of Toronto, to Miss Maude Dover, June 15.

Dr. W. J. Dobie, of Weston, to Miss Mabel James, June 2.

Dr. A. R. Jackson, of Bolton, to Miss Mildred Gray, June 10.

Dr. A. McCannell, of Minot, N.D., to Miss Violet Rose, June 17.

Dr. Robert R. Fitzgerald, of Lockport, N.Y., to Miss Edith Bowley, June 24.

Dr. Wesley T. Rich, of Horning's Mills, to Miss Blanche Webster, June 24.

Obituary.

J. CURRY SMITH, M.D.

Dr. J. C. Smith, a well-known physician in Barrie, died, July 30th, aged 44. He had been ill for only a week with what was supposed to be a comparatively mild attack of appendicitis or typhoid fever. Without any apparent reason he suddenly grew worse, passed into coma, and died in a few hours.

He graduated from the University of Toronto in 1891, and then practised for a short time with Dr. Harvey in Orillia. He went from Orillia to Barrie several years ago, and soon built up a large practice, and was highly respected by the community generally.

P. PALMER BURROWS.

Dr. Burrows, of Lindsay, died suddenly at his residence, July 31st, aged 67. He had been out making his usual calls in the morning, and on reaching home complained of pain in the region of his heart, and expired in a few minutes.

He graduated from McGill in 1866. He was recognized as a man of more than ordinary ability, both in medicine and science, and soon became prominent in Lindsay, both as a physician and a public man.

JOSEPH ARTHUR MALLOY, M.D.

Dr. J. A. Malloy, a graduate of Toronto and Trinity Universities of 1895, formerly of Brampton, Ont., died at Okanagan Centre, B.C., June 22nd.

Book Reviews.

Transactions of the Congress of American Physicians and Surgeons. Seventh Triennial Session, held at Washington, D.C., May 7, 8, 9 and 10, 1907. Published by the Congress.

We congratulate the Congress on this material method of bringing before the profession many excellent papers.

The first sixty pages give in full the names of officers, guests, members, etc., following this come two main articles, the first on the "Historical Development and Relative Value of Laboratory and Clinical Methods in Diagnosis," associated with the names of Osler, Barber, Stengel, Cabot and Blumer; the second on the "Comparative Value of the Medical and Surgical Treatment of the Immediate and Remote Results of Ulcer of Stomach," discussed by Musser, Stockton, A. J. Mayo, Munro, Jacobi and Janway. The address of R. H. Fitz, the President, on the "Borderland of Medicine and Surgery," concludes the volume.

Modern Medicine, its Theory and Practice, in original contributions by American and foreign authors; edited by Wm. Osler, M.D., Regius Professor of Medicine in Oxford University, England; assisted by Thos. McCrae, M.D. (Tor.), Associate Professor of Medicine and Clinical Therapeutics in the Johns Hopkins University, Baltimore. Vol. IV., illustrated. Philadelphia and New York: Lea & Febiger. 1908.

This latest addition to the new system of medicine deals with diseases of the circulatory system, the blood, spleen, thymus and lymph glands. Prof. Osler contributes a chapter on acute endocarditis, another on diseases of the valves of the heart, one on diseases of the arteries, and one on aneurism. The other contributors maintain the high standard set by the first three volumes and amply fulfil our expectations. The only criticism we have to offer to the volumes, as a whole, is that there is not the same easy flow to the sentences as one finds in some English works. But everywhere the utility of the American continent is in evidence, and perhaps makes amends. We are not sure that this is not a better library system for a busy general practitioner.

A Manual of Pathology. By Guthrie McConnell, M.D., Pathologist to the St. Louis Skin and Cancer Hospital and to St. Luke's Hospital, St. Louis, Missouri. 12mo of 523 pages, illustrated. Philadelphia and London: W. B. Saunders Company, 1906. Flexible leather, $2.50 net.

It is a book that should be appreciated by students and by those who wish a ready reference work.

The volume is well illustrated with cuts and colored drawings from Ziegler, Cabot, etc., and contains much practical matter on laboratory technique, such as the preparation of stains and the methods of staining in blood work and in bacteriology. The chapter devoted to the method of conducting post-mortem examinations is especially valuable. The only thing to be regretted is that more space was not given to general pathology, but in view of the evident desire of the writer for compactness, it may well be overlooked by the reader.

Physical Signs of Diseases of the Thorax and Abdomen. By James E. H. Sawyer, M.A., M.D. (Oxon), M.R.C.P. (Lond.); Casualty Assistant Physician and Medical Registrar, the General Hospital, and Physician to out-patients, the Children's Hospital, Birmingham. Published by Bailliere, Tindall & Cox, Henrietta St., Covent Garden, London. J. A. Carveth & Co., Yonge St., Toronto, agents.

The above is an excellent and eminently clear and practical work, adapted more especially for students; no available space has been wasted on improbable theories, only those of a practical import have been discussed. Differential diagnosis from the aspect of physical signs has been carefully considered, illustrations and tables being employed for their elucidation. The book is well worthy of a place in the students' library.

Green's Encyclopedic of Medicine and Surgery, Vol. VIII:, Physiology (nutrition) to Rhinolalia. Published by Wm. Green & Sons, Edinburgh and London.

The first 100 pages are taken up with the completion of the section on Physiology, by Prof. Noel Patar. We note that the

subject of Hormanes has been discussed. Other outstanding sections are those on Pregnancy and the Puerperium, Post Mortem methods, the Pulse (fully illustrated by sphygmographic tracings), Refraction, Retinoscopy, and an excellent chapter on Rheumatism. The volume is in keeping with those already issued, and fully up to the same high standard.

Miscellaneous.

The Proteid Iron Preparations of the National Formulary, or the N. F. Propaganda, with some Queries and Conclusions.

When we have the temerity to state that some of the pharmacopeial and most of the National Formulary preparations intended as *substitutes* for well-known standard remedies are not "just as good" as the originals, that in fact some of these imitations are nasty, ill-tasting and ill-smelling concoctions (and that it is, therefore, wicked to mislead the physician and the pharmacist—the former to prescribe and the latter to dispense these substitutes), we are accused by some narrow-minded druggists, and some misguided or ignorant doctors, of bias. To assure our accusers that we are as free from bias as any living human can be, and that our only misfortune is that we have a penchant for telling the truth, regardless of consequences, would be a waste of time. Let us, therefore, see what pharmacists themselves—and real pharmacists with laboratory facilities—have to say about some of the National Formulary preparations.

Prof. W. H. Harrison, of the Northwestern University School of Pharmacy, Chicago, read a paper before the Chicago Branch of the American Pharmaceutical Association entitled "Notes on Proteid Iron Solutions." The paper appears in the *American Journal of Pharmacy* for April, and we advise every honest physician and pharmacist to read it there in its entirety. An abstract of it also appears in the A. Ph. A. Bulletin for May. Dr. Harrison considers the three proteid iron preparations of the National Formulary: Liquor Ferri Peptonati, Liquor Ferri Peptonati cum Mangano, and Liquor Ferri Albuminati. Of the first Dr. Harrison has the following to say:

Liquor Ferri Peptonati.

"The present National Formulary formula yields a product which is a thick red-brown liquid, with a very *disagreeable gluey** odor. It is clear in neither reflected nor transmitted light, and of such a colloidal nature as to render filtration impossible even under greatly increased pressure. The taste is

* Italics are ours thruout.

at first pleasant, followed by a strongly *alkaline* and *ferruginous* after-taste, which persists."

He then proceeds to show the reasons why a good preparation is impossible. The chief trouble lies in the peptone, of which it is impossible to obtain in the open market satisfactory or uniform specimens. Whether obtained from meat or fish albumen they "are prone to *rapid putrefaction* and yield iron combinations of most *offensive* odors."

Of Liquor Ferri Peptonati cum Mangano, which is openly and frankly intended as a substitute for Pepto-Mangan Gude, and on which substitute an immense amount of time and labor has been expended, the author has the following to say:

Liquor Ferri Peptonati cum Mangano.

"When made according to the present formula, with the materials obtainable on the market, the National Formulary preparation may be described thus:

"A dark brown *sluggish* liquid, with a most *offensive* odor, not unlike a mixture of *ammonia* and *putrefied beef extract.* Taste *alkaline, saline* and *nauseating.* It deposits after a time a *dirty white sediment,* which soon covers the bottom of the vessel.

"The finished product contains about .15 per cent. iron, .145 per cent. or less manganese, and .234 per cent. ammonium hydroxide, the latter serving the *sole purpose* of developing more *offensive* odors.

"I have prepared four samples, in each case using different samples of peptonized iron, the finished products being almost identical.

"The trouble with this preparation lies principally with the peptonized iron and ammonium hydroxide, although there is room for improvement elsewhere.

"Of six samples of peptonized iron examined, the products of the principal manufacturers of pharmaceutical chemicals, *all* showed that *putrefaction* was in progress.* Of seven examined for iron content, only one showed over 5 per cent. Fe O (3.5 per cent. Fe), and this one sample has not yet been on the market under the name of peptonized iron or iron peptonate.

* Dr. Harrison is not alone in his opinion. All pharmacists who investigated the matter think the same. Mr. M. I. Wilbert, one of our foremost pharmacists, and a member of the Council of Pharmacy and Chemistry of the American Medical Association, says: "This formula [*for Liquor Ferri Peptonati cum mangano*] directs that commercial ferric peptonate be used. This substance *at best* is *variable*, is *unstable*, and, as *usually* met with, is *decomposed* and *unfit* for use. Commercial manganese peptonate, suggested in the alternative formula, is even more unsatisfactory than the ferric peptonate."—Amer. Jour. of Pharmacy, May, 1907, p. 211.

"At the time this work was started, but two samples of iron peptonate and none of the soluble manganese citrate were obtainable on the Chicago market.

"After some time I succeeded in collecting some direct from the manufacturers, seven samples of peptonized iron and two of soluble manganese citrate.

"These two samples of soluble manganese citrate, although bearing the same title, are *entirely different substances.*

"(1) A light red-brown powder with a strong odor of acetamide and ammonia. It is a manganese-ammonium citrate containing about 18 per cent, manganese. Incompletely soluble in water, but solution is rendered clear by standing for some time with a slight excess of ammonia.

"(2) Pearl-colored scales (evidently made after the formula of F. B. Power, Proceedings A. Ph. A., 1902, 937). Contains 13.5 per cent. manganese. It is a manganese sodium citrate, freely water-soluble."

"In view of the above facts, it seems that a satisfactory preparation according to the present N. F. formula is *impossible,* although with a good sample of peptonized iron it could yield a *passable* one."

Now, gentlemen of the medical and pharmaceutical professions, please read the above carefully, very carefully. Here we have a preparation of great, thoroughly established, therapeutic value. That it is of great, thoroughly established therapeutic value is seen from the fact that it is prescribed by physicians universally throughout the country. That it is prescribed universally is seen from the fact that every manufacturer, big or little, and every would-be pharmaceutical chemist is racking his brains and spending his time and labor in his endeavor to prepare a successful substitute for Dr. Gude's peptomangan. And what is the result? What have we got? After hundreds and hundreds of attempts, after many years of labor, the leaders of pharmacy give us in the *third* edition of their book as a substitute for a well-known ferruginous tonic a formula, which yields in the hands of the *best* pharmacists a preparation of "a most *offensive* odor, *not unlike a mixture of ammonia and putrified beef extract.* Taste *alkaline, saline,* and *nauseating,* and depositing after a time a *dirty white sediment!*"

Is this the aim of real professional pharmacy?

And I appeal to you all to answer this question: If you had a boy or girl, wife or mother who was very anemic and

was in need of a mild, assimilable, non-irritating ferruginous tonic, would you give the original pleasant-to-eye, smell and taste—and stable pepto-mangan, or would you give the National Formulary Liquor Ferri Peptonati cum Mangano, which is physically, pharmaceutically and therapeutically *rotten* (there is no other term possible), which, according to the testimony of pharmacists themselves, has a *most* offensive odor, alkaline, saline and nauseating taste, and becomes very quickly decomposed? Would you run the risk of ruining their stomach and making them still sicker, because the imitation product may perhaps cost ten cents cheaper? And if you would not, if in your own family you would use the genuine product, why should you treat the outside public so badly?

Dr. Harrison claims that after numerous trials he has succeeded in preparing a satisfactory solution of iron peptonate with manganese. He gives an exceedingly elaborate formula and process. Assuming this to be the case, does anyone believe that one druggist in a thousand would go to all these pains to select materials of the highest quality? And does anyone believe that one druggist in a thousand would succeed in making a satisfactory preparation by following Dr. Harrison's elaborate directions, which it took him months to perfect? And what is it all for? And this leads us to the important question:

What Is It All For?

Who inoculated us with this crazy substitution-mania? What obsession has taken possession of us, that no sooner has a preparation become popular, no sooner has a real demand been created for it, than pharmaceutical professors and sub-professors, their assistants and sub-assistants, our manufacturers and their employees, anxious for a raise, and, what is worse, our National Formula makers, begin to spend time, labor and material, in order to prepare a more or less satisfactory (?) *substitute!* As a result of this we get a hundred different imitations, all varying in color, odor, taste, chemical composition and therapeutic action, and many of them positively rank, irritating and injurious. And this is called the elevation of pharmacy and therapeutics! It is not thus in Europe. We do not hear of the English, German, French or Italian professors and pharmacopeia makers spending their time and labor in the attempted manufacture of imitations of well-known products. They spend their time and labor in *original research and investigation!*

The imitations, we said, all differ widely in character, and not one of them is as good as the original. The reasons are easy to understand. The manufacturer of one or only a few specialties devotes his entire time, energy and capital to those specialties. He makes numerous experiments; he uses materials of the highest obtainable quality; he invents or instals special machinery, if necessary. All these things are entirely out of the question with the retail druggist, and even with the big general pharmaceutical manufacturer; for, making several hundred to several thousand different preparations, it is impossible for him—*it does not pay him*—to devote too much time, labor and expense to an imitation of somebody else's specialty—especially as he has no reputation to gain or lose on it. Yes, the reasons are perfectly plain, why the imitations are never as good as the really worthy original additions to our therapeutic armamentarium. But while I knew a priori that this was so, I wanted to convince myself by concrete examples, by incontrovertible facts. I secured samples of practically *every* preparation which our noble pharmaceutical leaders have introduced into our Pharmacopeia and National Formulary as substitutes for well-known proprietary products. I secured samples of the "official imitations" of arsenauro, antiphlogistine, aristol, lysol, pepto-mangan, Gray's glycerine tonic, Gardner's hydriodic acid, Fairchild's essence of pepsin, Carlsbad salts, glyco-thymoline, listerine, even of such a simple thing as resinol, and *not in one instance* was the imitation equal to the original in purity, taste, homogeneousness, stability, etc. Some of the preparations were absolutely rank, disgusting, and I could but feel contempt, mixed with indignation, against certain high moguls of pharmacy, who mislead the poor retail druggist and the unsophisticated physician into the belief that their careless, imperfect, theoretical, extemporaneous formulæ will yield products "just as good" as the standard products, which are the result, perhaps, of many years of chemical or pharmaceutical research, and which are prepared in specially adapted laboratories with the utmost care.

We will now pursue another line of thought. Let us assume for a moment that after the expenditure of a lot of time and labor somebody has succeeded in preparing an imitation of some well-established proprietary, which is *absolutely* "just as good"—absolutely the same—pharmaceutically, chemically and therapeutically. Let us assume it. What has

been accomplished? What has been added to pharmacy and chemistry? Nothing! Not an iota. Merely a product that has already been in existence and in use, has been duplicated by somebody else. But here somebody will be sure to interject: "Why, the product has been cheapened." A product that can be manufactured by everybody is generally cheaper than a monopoly product. But to whom is the product cheaper? To the public? Any such assertion would be emphatically untrue. Just prescribe 12 ozs. or a pint of the imitations, let us say, of Liq. ferri peptonati cum mangano or Elix. gentian. glycerinat. and see how much a druggist will charge. As a matter of fact, I have been told and know personally of instances where my good friends, the druggists, make it a rule to charge *more* for the N. F. preparations than for the original products. Incredible? Just try it yourself. Do you want additional testimony from an unimpeachable source? Take the *American Journal of Pharmacy,* for May, 1907, and open it to page 236. On that page you will read the following:

"Professor Remington, in the course of his remarks, strongly deprecated the reported tendency of pharmacists to *charge more* for U. S. and N. F. preparations than for corresponding proprietary preparations, and expressed the belief that practices of this kind would surely do much to discredit the propaganda and do an infinite amount of harm."

It is thus *seen*—and seen in a manner which cannot be gainsaid—that the public is not at all benefited by this U. S. P.-N. F. propaganda. Who then is benefited? The druggists? Yes, that I admit. The druggist is to a certain extent benefited by this propaganda. And nobody begrudges it to him. Eking out, as he does, a very poor living, after working longer hours than any other tradesman or professional man, nobody, I am sure, will grudge the druggist a few extra cents profit (*provided* the imitation products are really in every respect as good as the original ones). But, this being so, that is, the manufacture of imitation products *not* tending to the elevation of pharmacy and chemistry, and *not* being of the slightest benefit to the public, let us say so! Let us have a clear understanding as to what all this propaganda is about. Let us stop talking about the elevation of professional pharmacy, let us stop throwing dust into the eyes of the unsophisticated physician, and let us acknowledge openly and honestly that the entire N. F. propaganda is a movement instituted for the purpose of affording the druggist a larger profit

on physicians' prescriptions and—if it must be said—of making substitution respectable, of giving it, so to say, an official status. Is this putting it too strong? But it is the truth, and the language of truth, said the Romans, is simple; simple, plain and direct.

A Warning.

And here I wish to utter a word of friendly warning to the pharmacists of this country, which warning I trust will be heeded by the readers of the *Critic and Guide*. Suppose the N. F. propaganda is successful and the doctors begin to prescribe N. F. preparations instead of standard long-established products. Then the druggist must be *sure*—and this is my warning—that the preparations he dispenses are really of high merit physically (taste, odor, etc.), pharmaceutically and therapeutically. Otherwise, he will only hurt himself, the thing will act as a boomerang; the doctor's confidence in the retail druggist's ability will be shaken still further, and he will be still further strengthened in his belief that the safest thing is to prescribe brand preparations of known composition—or he will be driven into self-dispensing. Here are two actual experiences—two out of many that I could relate. A physician was in the habit of prescribing large quantities of Hayden's Viburnum Comp. The druggist to whom most of the prescriptions used to go thought it wise to do some missionary work with the doctor, showed him circulars about nostrums, etc., and urged him to prescribe the N. F. substitute for H. V. C., which, he claimed, was superior. The doctor finally, half-persuaded, wrote a prescription for Viburnum compound N. F. The druggist prepared it extemporaneously and dispensed it. The woman complained to the doctor that the medicine did not taste like the other times, made her sick at the stomach, and didn't do her any good. The doctor, as he told me, then sent the N. F. to ——, continued to prescribe as formerly, and the missionary druggist is now getting fewer prescriptions from him than formerly. The second case is one in which a druggist dispensed a muddy, ill-smelling, strongly alkaline mixture instead of pepto-mangan, which the doctor had prescribed, and as a result lost almost his entire prescription trade, for the doctor was one of those who looked at the substitution business very seriously and took pains to tell the members of his medical society that the druggist O. was a substitutor.

Yes, make sure, when you do create a demand for U. S. P. and N. F. preparations, that you are able to supply the demand. For it is a well-known fact that *not* 5 per cent. of the druggists in the country are capable of preparing even the half-way complex preparations of the U. S. P. and N. F. (such as the organic iron preparations, effervescent salts, etc.).

We are not alone in our opinion that the N. F. propaganda is not the best thing in the world. Some prominent pharmacists think the same way. Take the *American Journal of Pharmacy* (June, 1907). On page 296 you will find a report of a paper entitled "Practical Results with N. F. Preparations," read before the Philadelphia College of Pharmacy. In discussing that paper, a prominent pharmacist, Mr. D. J. Thomas, "was inclined to question the advisability of pursuing this line of work at the present time, thinking that *the rank and file of pharmacists were not prepared to meet the demand* for U. S. P. and N. F. preparations. He recounted some experiences that had come to his attention that appeared to indicate that pharmacists in his locality, like pharmacists in other sections, had been remiss in their duty to themselves and their customers, and had not kept themselves posted on the progress of pharmacy along the more practical lines. He also called attention to several formulas that *when followed exactly did not give satisfactory preparations.* Among these he enumerated the glycerinated elixir of gentian and the cataplasm of kaolin."

This article could be drawn out so as to occupy an entire issue—for numerous facts and illustrations could be offered as proofs in support of our position—but we believe we have said enough to show the tenability, the validity of our reasons, the impregnability of our position, to any fair-minded person, to any person who really wants to know the truth.

And now for a brief resume of the conclusions based upon the facts and arguments presented in our editorial. The conclusions are as follows:

1. The products introduced into the Pharmacopeia and National Formulary as substitutes for other well-established products are inferior, in practically every instance, to the originals, while some of the formulas yield nasty, irritating, nauseating and, therefore, therapeutically worthless products.

2. To urge the physician to prescribe these imitations *in lieu* of the original products is, therefore, dishonest. The

physician *is not in any way* benefited, while the patient is distinctly injured.

3. This so-called National Formulary Propaganda has nothing to do with ethics. Instead of elevating, it tends, as we have shown, to degrade both pharmacy and medicine. It is purely a money-making proposition.

4. The public is not in any way benefited by this propaganda, for the patient has to pay just as much (and often more) for the *inferior* substitute as for the *superior* original.

5. The deduction which logically and inevitably follows from the above conclusions is this: If you know the composition of a product and that product has given you satisfactory results in your practice, stick to that product; prescribe it and see that you get it; and do not allow yourself by specious reasoning and false claims to be persuaded to use an imitation or a substitute, *be that imitation or substitute official or non-official.—Critic and Guide.*

Summer Dysentery as it Appears Hereabouts, its Treatment, etc.

By C. H. Powell, A.M., M.D., Prof. Principles of Medicine, Physical Diagnosis and Clinical Medicine, Barnes Medical College, St. Louis, Mo.

Case 1. Dysentery in a Child Aged Seven Years.—I was, one very hot day in August, summoned to the bedside of little Jimmie McL., who was suddenly compelled to go to bed screaming and crying with his stomach paining him. I found his little features pinched and lips pursed together, his face very pale and eyes looking hollow and expressionless. His mother stated that the little patient had been complaining of not feeling well for the past twenty-four hours, and she noticed that he slept but very little the night before, and made several trips to the closet. Believing that dysentery after all is brought about by germ activity, the thought occurred to me that if I could give some efficient but mild germicide internally, and at the same time could flush out the bowel with the same antiseptic, I would have the key to the situation. Accordingly I gave a teaspoonful dose of Glyco-Thymoline internally every three hours, and put about one ounce of Glyco-Thymoline to the pint of water, with which I flushed the fluid through a good sized catheter high up into the bowel. An immediate improvement at once manifested itself. The pulse became perceptibly stronger, the fever reduced, the little patient became brighter in the face, and the case at once changed from a very

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A PLEA FOR RATIONAL THERAPEUTICS.*

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A more suitable title for this paper, perhaps, would be "The Rational Use of Drugs for the Cure of Disease," as it is only with drug therapy that I propose to deal. And my remarks will be more suggestive than exhaustive, for I have no intention of presenting to you a treatise on materia medica and therapeutics.

At the outset I would make the statement that there is reason, and good reason, for the use of drugs in the treatment of disease; but they must be used in a rational way, and not in a haphazard, hit-or-miss fashion. I have no sympathy with the therapeutic nihilism that has become so fashionable in some quarters, and which is openly avowed by many "eminent authorities."

Medicine, especially in its practical aspect, is not yet an exact science, and indeed never will be, because all the factors in the solution of every problem can never be known; there will always be an X quantity, which will vary in each case. These problems, however, are being constantly reduced to simpler factors, the values of which are becoming definitely known, and, while there will always be an X, we are gradually arriving at greater exactness in the solution of the many-sided problems of disease.

For proof of the statement that there is good reason for the use of drugs in the treatment of disease I would point to such facts as the following: the value of quinine in malaria, mercury and iodine in syphilis, antitoxin in diphtheria, morphine as an

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anodyne, strychnine as a nervo-muscular stimulant, digitalin as a cardiac tonic, and many more that will readily occur to every physician. Many of these facts have been discovered empirically, and every day more and more of them are being rationally and scientifically explained. The field, however, for the scientific study of drug remedies is still largely uncultivated, and gives promise of a bountiful harvest to any who will earnestly undertake to work it. In the past, and even with many physicians yet, the basis of the therapeutic art has been almost exclusively empiric, *i.e.*, guided by experience or observation, rather than by scientific knowledge. Our knowledge of chemistry, physiology, pathology, etc., and our skill in diagnosis have wonderfully increased, but the development of the science and art of therapeutics has lagged behind. The reason for this for a long time was that the physician had but few reliable, definite, uniformly-acting remedial agents. The remedies of the authoritative pharmacopaeias were crude, uncertain, a conglomeration of incompatibles, or absolutely inert. The galenical preparations of the present day, of the vegetable drugs especially, *i.e.*, the tinctures, infusions, fluid extracts, solid extracts, and all preparations manufactured from crude drugs, are objectionable, and their use is unscientific, because they are uncertain and variable in their composition, strength and results, and their dosage is unreliable and misleading.

They are not of uniform strength, because (1) the plants from which they are derived do not contain the active principles in uniform proportions; these vary as do the conditions of temperature, moisture, sunshine, soil, locality, season, etc., in which the plant grows or the specimens are gathered; (2) the age of the crude drug; (3) the varying methods employed for extraction; (4) the constant changes going on in the preparation after being placed on the market—change due to decomposition, evaporation of menstruum, or of volatile active principle. Specimens of belladonna vary in their alkaloidal content from 1 to 50; opium varies in its morphine content from 2 to 18 per cent. Again, most plants contain more than one active principle the physiological effects of which are frequently diametrically opposite. From opium some 26 different active principles have been isolated, no two of which produce the same effect; at one end of the series we have morphine, purely sedative, and at the other thebaine, a powerful stimulant. Digitalis contains five glucosides, one of which is possibly inert, three others have in varying degrees the well-known effects of the one most commonly used, digitalin, a tonic to the heart, a contractor of the muscular coat

of the arteries, and a diuretic; while the fifth, digitonin, is a direct antagonist of the others, being a cardiac sedative and relaxor of the arteries. The quantity and proportion in which these are found in different samples of digitalis leaves vary considerably, and, therefore, the actual strength and composition of infusions and tinctures prepared from different samples of the drug will vary. So that from one preparation we may get a heart-tonic effect and from another that of a heart sedative. Digitalin gives us the maximum of heart-tonic effect with a minimum of vascular contraction, while digitoxin is a very powerful vascular contractor; digitonin, on the other hand, being a cardiac and vascular sedative. Hyoscyamus contains two active principles—hyoscyamine, which is a cerebral stimulant and deliriant, and hyoscine, a cerebral sedative and narcotic. Ipecac has two active principles, emetine—an expectorant, and cephæline—an emetic and irritant; and Carthagena ipecac is always richer in cephæline than Rio ipecac. Jaborandi contains 6 alkaloids, the principal one pilocarpine, which is a powerful stimulant of the sudoriparous, salivary, and mammary glands. But sometimes the alkaloid jaborine will predominate, which has an entirely opposite effect. Nux vomica contains strychnine and brucine. Cinchona bark, who shall say how many, though we have practically discarded all now except quinine. And so I might go on to enumerate most of the vegetable materia medica to prove the unreliability, uncertainty, and want of uniformity of their galenical preparations. The chemist, pharmacist, and physiologist, however, have been at work, and have supplied us with many uniformly-acting agents, and plenty of data concerning their actions, which constitute real scientific knowledge. I refer to the various definite chemical compounds, alkaloids, and active principles of drugs, a large number of which is now well known and has been thoroughly studied. What is required is, that this knowledge should be applied in the ordinary practice of the profession.

Now, the first requisite in the rational practice of therapeutics is that we make as exact a diagnosis as is possible, using every means at our command to determine accurately every mophological or structural, and physiological or functional departure from the normal. There is no room here for "snap diagnoses." The man of the broadest culture and the deepest scientific knowledge should be the best diagnostician, not the specialist, who has too often a tendency to refer everything to some derangement of his limited sphere. Exhaust every means of getting at "the truth, the whole truth, and nothing but the truth," physi-

cal, chemical, macroscopic, microscopic, biological, and psychological; and this must be done for every individual patient. It is the individual patient that is to be cured, not the disease; and the practitioner who asks, what is good for pneumonia, or peritonitis, mumps, or meningitis, is not working along rational lines. We must remember we have as yet but few specifics for diseases as entities; our definite remedial agents are specifics for conditions. In other words, our treatment of disease in any individual case must be mainly symptomatic.

The first essential, then, for the successful practice of medicine is diagnosis, and the second is treatment—what is wrong with the patient, and how are we to cure him? And all our knowledge and study of anatomy, physiology, pathology, symptomology, etc., is only to enable us to make a correct diagnosis, not to name his disease, but to recognize the departure from the normal in every organ and function of his body. Then with this knowledge we have to set about restoring the normal; and to this end we make use of our knowledge of the actions of remedial agents; and it goes without saying that unless we *know* what an agent will do under certain conditions, our use of it is irrational and unscientific, and we are merely experimenting. Indeed, the ordinary practice of drug therapy, the practice taught in many of our recognized text books and medical schools is uncertain, inefficient, wrongly directed, unpalatable, crude, irrational, and unscientific. Too many of the so-called "eminent consultants" seem to think, that when they have made an accurate and minute diagnosis, their duty ceases, and they have simply to fold their hands and allow the vis medicatrix naturæ to work out the cure. From the patient's point of view, however, the main thing is the treatment. What is he to do, be, or suffer to get rid of his ailment? And he wants this end accomplished "*cito, tute, et jucunde.*" The practitioner who, when called in to a patient, finds he has had a severe chill, and has now an elevated temperature and rapid pulse, with pain in one side of his chest, dyspnœa, and a slight cough, makes, after a careful physical examination, a diagnosis of acute lobar pneumonia, and then tells the sufferer or his friends that this is a self-limited disease, which will run its course uninfluenced by any method of treatment, and proceeds to carry out this do-nothing policy, is not the kind of a physician the average patient cares to entrust himself to.

Having then determined what is the abnormal condition present, we proceed to apply the remedy which we know to be capable of antagonizing this abnormal state and restoring

the normal. And we may lay down three fundamental principles which govern the whole therapeutic art: (1) To stimulate or sedate, as may be necessary, the various vital functions; (2) to antagonize, directly or indirectly, invading organisms; (3) to aid in the elimination of waste products.

Most likely there will be several abnormal states which we wish to correct, and to this end we combine the appropriate remedies for each, endeavoring as far as possible to use single remedies or simple combinations.

These remedies must be in solution before they can be absorbed or exert any action; they must get into the circulation, no matter whether administered by mouth or hypodermically.

Then the question of dosage is an important one. For acute conditions the obviously rational method is to give small doses at frequent intervals, and repeated till the desired effect is obtained. In chronic cases give larger doses three or four times a day, but always in any case continue the administration until the required result is produced, or until it is seen by the absence of this that we are on the wrong track, and must go back and start afresh along some other line.

As autotoxæmia plays such an important role in nearly all diseased states it is imperatively necessary at the outset of treatment to thoroughly clear-out the alimentary canal, and keep it clean, rendering it and its contents as unsuitable a habitat as possible for pathogenic organisms by the use of some safe, effective intestinal disinfectant.

As I have already stated, we have now many reliable remedial agents; and the advantages of the use of these definite uniformly-acting substances are:—

(1) We know their exact physiological effect,

(2) We know their quantitative effect, *i.e*, how much effect will be produced by a given amount of the remedy,

(3) Exactness of dosage,

(4) Rapidity of action, depending on their solubility and ready absorption,

(5) They may be used in many cases hypodermically as well as by mouth.

If these methods be followed in the early stages of many acute diseases we will be surprised to see how many of them will fail to run their natural course,, and we need not hesitate to say, that we are able to abort or cut short the duration of acute diseases like common colds, pneumonia, typhoid fever, etc.

I may now briefly summarize the points I have tried to bring out:—

The conditions of a rational drug therapy are:

(1) An accurate diagnosis.

(2) An accurate knowledge of the drug.

(3) A definite object in view in its administration.

(4) As far as possible it should be given uncombined.

(5) Enough, and no more than enough, should be given to secure the desired result.

The objections to the commonly used drug preparations are:

(1) They are uncertain and variable in their composition and strength.

(2) They are indefinite and unreliable in their effects.

These objections can be overcome, and a rational system of therapeutics evolved, by using single definite substances, alkaloids, or active principles of known composition, properties, and reactions, capable of producing definite results. The advantages of this method, which has been called the dosimetric or alkaloidal system, are simplicity, efficiency, accuracy, uniformity, safety, ease of administration, and palatability.

Discussion by V. E. Henderson.

Dr. Acheson's able plea for a more rational use of drugs in therapeutics has undoubtedly found among us sympathetic ears and widespread approval. It especially appeals to one, who, like myself, is especially interested in teaching pharmacology and therapeutics. I think, too, that all of us will agree with him when he urges the more exclusive use of drugs whose action is known. By known I would be understood to mean those drugs which have been thoroughly tested by competent pharmacologists and physicians. Daily new drugs are brought to the attention of each one of us by proprietary houses interested in their sale. Many of these preparations are said to have been carefully tested in the laboratories of the firms that have prepared them. I am far from decrying the chemists and pharmacologists in the employment of the more reputable of these firms; on the contrary, I would be the first to acknowledge the valuable and careful scientific work done in the laboratories of such firms as Parke, Davis & Co., or Borroughs, Welcome & Co. But I ask, is it fair to expect that employes of such firms should be entirely free from bias in the judgment of their own productions. Anyone who has spent months in the perfecting of any piece of work is naturally inclined to rate it too highly. Further, in many cases these drugs are accompanied by reports of physicians usually quite unknown to us, and often when known completely unsatisfactory on account of their evident

lack of critical care in selecting their cases and judging of the effect of the treatment. For example, I heard read before an important society last year a paper upon the effect of the administration of cacodylate of soda in cases of pernicious anæmia. Some three or four cases were reported upon, and all showed improvement when placed upon the drug. The author of the paper, however, seemed to have completely forgotten that many cases of pernicious anæmia show improvement quite as great when given simply rest without drug treatment, and indeed show often surprising remissions. Many of you will remember the very great vogue and praise which piperazine received when first introduced; everyone could see for himself that it had simply extraordinary powers of dissolving uric acid in the test-tube, and it is surprising how many physicians of high standing sung its praises, but unfortunately some mere pharmacologists studied its solvent action and found that disappeared completely in the presence of sodium chloride. Unfortunately at the time the quantitive excretion of uric acid under its use were carried out, and these, too, disclosed its inefficiency.

Further, I think that we are all in agreement with him in his statement of the necessity of an accurate diagnosis as a prelude to rational treatment. But unfortunately the best of us are at times unable to fulfill this condition. And having made our diagnosis aright, how often we have no drug which will fulfill Dr. Acheson's further three principles. In spite of the years, centuries one might say, of search, we have very few drugs which will attack organisms within the body in doses in which they do the body no harm. The examples of this class are, I think, quinine in malaria and possibly whooping cough and pneumonia, mercury, which alone kills off the spirochæta pallida, the cause of syphilis, possibly the salicylates in acute rheumatism, atoxyl and trypanred and its congeners in trypanosomiasis, urotropin and the salicylates which excreted in the bile serve to kill off the germs in the biliary tract, the urinary antiseptics, of which urotropin is one of the most important. To these one might add the antitoxins. Again, I fancy, many of us have some doubt as to whether we have any drug that will aid in the elimination of waste from the body, unless we consider water as a drug. Doubtless diuretics may help at times, but often are of no avail. This is especially true of gout, where neither water alone nor with alkalies nor diuretics seem to increase the excretion of uric acid. It appears as though water containing salt (sodium chloride) alone was efficient. Not as

yet have we the clue necessary to force the kidney to do our will in excreting increased quantities of waste. It seems that we are slightly more successful by purging, in bringing about increased elimination of waste by the bowel, while we know that the skin can contribute but slightly in this direction, except as far as water is concerned. No, it is but rarely that we can aid the body directly with drugs, more seldom perhaps than we can aid it with other means. But, as Dr. Acheson has so correctly pointed out, we can frequently aid it indirectly.

Dr. Acheson's scheme of dosage seems to me also to be open to much criticism. It seems to me to very largely partake of that empiricism from which we are so anxious to free ourselves. Why small doses repeated in acute diseases? In malaria the indication undoubtedly is to give a large dose immediately previous to the onset of the fever, so that as large an amount of the antiseptic may be in the blood at the time of sporulation. The same method seems to be indicated by our later knowledge of syphilis, and many observers claim that the method of large initial doses is the only successful method of giving salicylates in rheumatism. The method of treating acute or subacute failure of cardiac compensation by the intravenous administration of artophonthine, which has now given such good results in the hands of several good observers, and in which the entire amount needed in many cases to re-establish compensation is frequently given at once, is another instance which completely breaks the suggested rules.

Nor can I agree with Dr. Acheson's wholesale condemnation of galenical preparations. I think that any pharmacologist would prefer to prescribe the tincture of aconite for internal administration rather than the preparations of aconite at present upon the market, as he knows the difficulty in obtaining even by the same method samples of the alkaloid similar in chemical composition and strength. Nor would he care to see the galenical preparations of digitalis condemned in favor of the so-called purified glucosides which would have to replace them, because, again, he knows how greatly these preparations differ in composition and strength. All of you will recall that aloes is much more efficient than aloin, and no one would think of replacing balsam of Peru by its active constituents. There is, it is quite true, great disadvantages, and even dangers, in the use of galenical preparations of the very highly active drugs, and especially such as do not lend themselves to standardization by the chemical estimation of their active principles. The profession should doubtless demand the pharmacological standardization of such

drugs as ergot, digitalis strophanthus, and squill. Dr. Cronyn has lately been examining in my laboratory the preparations of ergot on the market, and it is simply astounding to see how they vary in activity—a variation doubtless as great as is expressed by the numbers 100 to 1.

I should like to join with Dr. Acheson in a plea for more rational therapeutics. But I think that the best way in which to obtain this end is to make a strong plea for a wider reading and a more thoughtful study of modern physiology and pharmacology. Will you ask yourselves: First, have I a good modern physiology and an equally good pharmacology? Secondly, do I ever consult them? Am I really trying to apply my knowledge of these sciences to the treatment of individual cases of disease. And might I make a further plea for a more careful critical consideration of the literature on new remedies distributed by the pharmaceutical houses, and under their influence contributed to the medical journals. Ask yourselves when a new preparation is suggested whether the claims for it are rational, and in scanning any series of cases, whether the percentage of recoveries would not have been as good without the drug.

DR. NORMAN WALKER.

I have used the alkaloids with success for a number of years. One experience with tr. aconite from the country drug store was that of a homœopathic physician, who had used tr. aconite with no result. On my using a few granules of aconitine prompt results were obtained. About the standardization of drugs, I believe that it was the coming of the alkaloids which has compelled the galenicals manufacturers to standardize their drugs.

DR. JOHN HUNTER SAID—

I wish to call your attention to the utterly illogical methods we generally adopt in treating diseases. Very properly we are striving to make as accurate a diagnosis of the disease as our intelligence and experience enable us to make. We endeavor to prescribe the most efficient drugs we know of. So far we are consistent and scientific? But are these all? We know that the nutrition of the patient is always an important factor, and in many cases the all-important factor. Now, what do we do? We ask for an educated druggist to put up the prescription, but we have, without striving to obtain any information as to the ability of the cook. The diet may be the most important factor, but yet we do not know that the cook has the requisite

knowledge to prepare the food in a palatable manner. An ignorant cook may destroy the virtue of the most scientifically prescribed diet. The only effort to remedy this blunder was made in a consultation with Dr. Allan Bain of Toronto. He thoroughly agreed with my diagnosis and treatment, but had not the same faith in the cooks, and he spent about an hour in teaching the mother how to prepare the food for her baby. Had I spent half the time in teaching the mother that I spent in confirming my diagnosis and treatment, I think the baby would be alive to-day.

DR. CRUICKSHANK SAID—

The only measure we have of the good we do a patient is the amount of his increased resistance to disease. If we do not confer a measure of immunity we do no good. I believe the superstition of the nineteenth century is the belief in drugs, to the exclusion or slighting of other means, such as suggestion and manipulation.

DR. D. MCGILLIVRAY SAID—

A few remarks as to the uncertainty of the common preparations found in our drug stores of the day. The great need of the standardizing of official preparations, under state supervision.

REPLY BY DR. ACHESON.

Accurate knowledge refers specially to knowledge of action gained from clinical evidence. Of course, we owe much to the laboratory workers, but as practical physicians, it is to clinical results we must look. The standardizing of glenical preparations, is a step in the right direction, but does not go far enough. They are standardized only for a single active principle, whereas many of them contain several.

THE IRREPARABLE LOSS OF UNRECORDED EXPERIENCE.

JOHN HUNTER, M.B., TORONTO.

The history of the world is a record of experience. This record has been perpetuated in many ways—in architecture, by the Pyramids, and by vast ruins; in art, by Grecian sculpture and Roman paintings: in music, by the majestic compositions of the great masters: in traditions, songs, folk-lore, costumes and habits. But none of these can compare with the records made possible by the art of printing. Without a printed Bible, the spiritual world would be in a chaotic state. The historian has enabled many to live over again in imagination the lives of the great actors who have played their part, and have passed off the stage in the world's drama. The printing press has reared an imperishable treasure-house, in which are stored many of the richest and rarest gems of literature, science, art, music—in brief, a collection of the words and works of mankind.

If the printed page has done so much for the needs of the laymen, it has been equally generous in its service to the members of the so-called "learned professions." Without his books, the lawyer would be shorn of that strength which is so much in evidence when he wishes to establish his plea by referring to weighty precedents in the statutes. Who has been a witness or a spectator at court, and not noticed the impressive pose and exultant look of the learned counsel, as he hands up the marked paragraph to the judge! The physician, since his patients accept his statements without having to be verified, may say, if inclined to be cynical, that this act on the part of the lawyer is rather a reflection on his veracity. However this may be, custom seems to have sanctioned the procedure, and reference to the printed statutes constitutes a most important factor in law courts. But, much as law is indebted to the printed records of the past, the science and art of medicine is no less a debtor, and this brings up for discussion the vitally interesting question of the "Irreparable Loss of Unrecorded Medical Experience."

The subject is a very large one, and any discussion, in a brief article, must be limited to two or three phases of it. The following three have been chosen:

1. Value of the historical records of experience to medicine.
2. Value of recorded experience to the profession.
3. Value of recorded experience to the physician himself.

Volumes could be written on the value of recorded experience to the science and art of medicine, but space only permits of a very cursory glance at this phase of the subject. Biblical literature contains many records of the art of healing. In Assyrian, Arabian, Egyptian, Hebrew, Grecian, and Roman myths, traditions, works of art and history, are to be found wondrous records of the healing potency of prayers, and sacrifices to the gods, and of the great virtues in charms and other psychic devices. But, coming to the records of the scientific achievements, and experiences, of the long line of illustrious physicians, who "blazed the way" through the dense masses of ignorance, delusions, dogmas, that confronted the medical pioneer, and what do we find? On nearly every page of historic medicine we have evidence of the beneficent results that have followed from recorded experience. In ancient days, it was a common custom in Egypt to place the patient by the wayside, that he might receive advice from anyone passing by who had experience to relate. The patient, when cured, repaired to a temple, where a record of his case was taken and kept. The attributes of Æsculapius, "the God of the Healing Art," acted as an inspiration to many generations of physicians. It is said of Hippocrates, "the Great Father of Scientific Medicine," that his culture, his keen and patient power of observation, accuracy of description and exalted ideals have left their impress deeply stamped on medical literature for all time. Of Galen, it is recorded that such was the high character of his attainments, and of his ideals, that his writings dominated medical thought for more than fifteen centuries.

Now, who could compute the loss to scientfic medicine if no written records had been kept during the first eighteen centuries of the Christian Era, of the experience of Linacre, Dubois, Vesalius, Paré, Harvey, Cullen, Morgagni, Hunter, Jenner, and a host of others? Generations yet unborn will render homage to these "immortals," and also to the records of a Morton, Simpson, McDowell, Beaumont, Virchow, Pasteur, Lister, Roenten, Finsen, and to our own lamented comrade, George Peters. The value to the Art and Science of Medicine, of its historical records of experience, can never be estimated, for it will go on increasing as long as disease is allowed to menace the human race.

"Value of Recorded Experience to the Medical Profession."

This story is a long and interesting one. The most cursory glance over the pages of the history of medicine is sufficient to

rival the slow evolution of our calling. In prehistoric times, and in the "ancient of days," the power of exercising the "art of healing" was an attribute of the deities. Prayer and sacrifice were the fees paid for the service. One great advantage these ancient practitioners had over modern ones is that the fees were always paid in advance. Biblical and secular literature are full of the records of supernatural intervention in the cure of disease. One of the attributes ascribed to Christ Himself is that of "The Great Physician."

It is somewhat inspiring to know that, in the evolution of the medical profession, its devotees have been deemed worthy to occupy the place assigned by our forefathers to the deities. In the earlier centuries of the present era, the profession of medicine was a bi-partite calling, consisting of what has been facetiously called "The Angelic Conjunction"—priest and physician in one person. These dual personages had their consultation-rooms in the temples. There lie, in the catacombs of mediæval medicine the remains of departed myths, creeds, superstitions, traditions, speculations, and disputations that inspired or perturbed the minds of these religio-medical cults.

A few decades later, on acount of an ecclesiastical edict, the clergy were forbidden to perform surgical operations. The effect of this edict was to create another "conjunction," viz., "the barber-surgeon," who "shaved, drew teeth, and breathed a vein." But the impetus given to the study of anatomy by the recorded experience of Vesalius, in his monumental work, "Fabrica Humani Corporis," induced the more ambitious of the barber-surgeons to lay aside the razor, and take up the scalpel. The result was that a final separation took place between the art of shaving and that of healing. Out of the elements of recorded experience was evolved the medical profession.

If our calling is so deeply indebted to the recorded experience of the past, what are the obligations of its present members to its status to-day, and that of coming ages? There are in the ranks quite a large number, who are not lacking in intelligence, industry, perseverance, or enthusiasm, and these, in every section of medical work, are making new discoveries, or bringing forward new theories and speculations. Now, the products of these virile minds may, or may not, be valuable. They may be true, or false, or a mixture of truth and error. As the crude ore is submitted to the flames to separate the pure metal from the dross, these new discoveries, theories and speculations must be tested in the crucible of experience. The status of the medical profession is not half as much impaired and menaced by the

lack of enthusiasm in research work as by the lack of intelligent, accurate, truthful records of the experience of its members. Any calling is heavily handicapped that is wanting in faith in its own art and science. Every physician can recall instances in his own experience, when, with a certain drug, mixture, or mechanical device, he has echieved marked success in the treatment of many cases. But just as soon as his faith in his remedy began to wane, it was thrown on the scrap-heap. Why this action? If an accurate written record had been kept, the virtue or worthlessness of the treatment would have been established. But, trusting to the illusive records of memory, the impression created by an unfavorable result or two caused his faith to vanish like the morning mist. Why are the middle and upper classes manifesting such a lack of faith in orthodox medicine? All our churches and social circles are filled with those who have gone after every conceivable cult and fad that ignorance, duplicity and avarice can organize or exploit. If these backsliders were composed of the poor and illiterate, it would not seem so strange; but they are the well-to-do, and in their ranks are to be found many of those who have won distinction for scholarship in colleges and universities. Can it not be said—after making due allowance for psychic, social and mercenary influences—that the most potent factor in this stampede from ethical medicine is to be found in the attitude of medical men toward the science and art of medicine, and toward their fellow-members, not only from the lips of the rank and file, but from those of the leaders, and from the printed page, are heard and seen the most skeptical utterances against much that is held sacred in medicine, and inuendoes intended to injure the reputation of fellow-members. We cannot ask the public to have faith in us if we are wanting in faith in our own art and science and in confidence in each other. It would be almost impossible to meet a reputable physician who does not deplore existing conditions.

What are the means to be used to help restore both the public and mutual confidence that is so estranged? Higher literary attainments, better teaching, and wider clinical experience for our students would do much. There is a field in which every physician can help to elevate medicine, and that is by keeping as intelligent, accurate, and truthful written records of his experience as he possibly can. These records could be compared with those of confreres, and of his fellow-members of the medical societies. Statistics could be compiled from these that would be of inestimable value in either confirming or disproving the virtues of many of the means and methods now in use. What

a fund of information could thus be furnished by the general practitioner, who may attend two or three generations of the same family! The effects of racial and industrial influences, and of social customs, could be more accurately ascertained. If it were possible—and why should it not be so?—to have even a majority of physicians place intelligently, accurately and truthfully recorded experience on the altar of scientific medicine, there would be witnessed within the first half of the twentieth century one of the greatest evolutions in the whole history of medicine. The well-to-do and intelligent classes would not wait until driven by fear or suffering to leave the charlatan to consult the reputable physician. This one act of loyalty to his vocation by each member of it would help to elevate the status of medicine and to create more mutual faith between its members. The value of recorded experience would be inestimable to the profession itself. The loss of the experience of tens of thousands of its members, through their death, is one of the most lamentable of tragedies, since myriads of human lives have perished prematurely from the lack of knowledge reliable experience could have furnished.

Value of Recorded Experience to the Physician Himself.

It is an indisputable fact that, in the medical ranks, are to be found many who are endeavoring faithfully to discharge their duty. But there is one delusion that dominates the medical doctor almost universally, and that is "too busy," "haven't time." There is no falser or more subtle delusion, for that individual has not been born who has not been given time enough to do what his duty demands of him. This delusion has done more injury to medicine than all the other failings of medical men. Ignorance, indolence, intemperance, immorality, have destroyed the individual physician, but the "too busy, haven't time" delusion has impaired the effectiveness of the whole army.

It would be impossible to meet any progressive physician who has reached middle-age, and especially one who is reaching the lower slopes on the farther side of the hill, who would not acknowledge that a full and accurate record of his own experience would be the best volume he could place in his library. The young physician who has enough intelligence and courage to commence practice with the fixed determination to keep an accurate record of his experience, dealing just as fully and truthfully with his errors and failures as with correct opinions and successes, will assuredly achieve a success that will give

lasting enjoyment, that is, the approval of his own conscience and the approbation of all whose respect is worth appreciating.

The intrinsic value of keeping such a record is very great, in that it is a splendid mental discipline. It keeps the mind fixed on facts, instead of letting it brood over every medical *ignis fatuus* that flits before it. The discussion of medical questions between individuals, and at medical gatherings, would be vastly more profitable and interesting if men could speak from an accurate record of experience. The keeping of this would prove a potent aid in helping the young physician to rise in the ranks. In a competition where the struggle is so keen, he would have a great advantage. It also requires some such discipline to even keep abreast in the ranks. There is always the possibility of being a worse, rather than a better, practitioner at the end of each decade than at its beginning. This retrograde movement is too much in evidence, and it cannot be checked too soon. It is doubtful if a more potent remedy could be found to prevent retrogression, and to stimulate progress, than the keeping of full, accurate records of experience. It would create an insatiable thirst for reading, and for research work. It would create a saving faith in the vocation to which the young physician has consecrated his life.

MEDICAL THOUGHTS, FACTS, FADS AND FANCIES.

By James S. Sprague, M.D., Stirling, Ont.

As it is more or less natural, if, perhaps, illogical, for us of the profession to feel our hearts warm with pride in the achievements of our fellows in medicine; and even in interests scientific or literary, not classed as medical, it certainly is humiliating for us to learn, and such too often occurs, that when the life-work of many of our profession is presented in an obituary notice, but two or three lines report much done for medicine, and to the ordinary reader it would appear as if, in such numerous examples, medicine was but a side-show, and political and municipal affairs more weighty. If we who are duly qualified to practise medicine are publicly known to devote our working hours to interests not in any sense medical, and consequently not having our hearts beating solely and energetically for medicine, the dear people soon learn it—and we suffer; and, while we are thus engaged, quackery flourishes, new cults arise, patients abandon us, and old age approaches, and, with it, its companion, penury. The moral is—there are too many M.D.'s who, although known to be in practice, yet are not devoting their whole energy to the work; in fact, are interfering with the zealous, hard-working and really few safe and reliable men in practice; hence, the poverty of many doctors, the many failures, the heartaches, and the wrinkled pocketbooks.

When fully equipped with all parchments, as testaments of university honors and state or provincial licensure, our modern doctor, for many years, will necessarily be an easy mark for book agents and others equally anxious to secure his scantily and hard-earned silver, for no one of his professors has told him of those conditions which, in a busy and practical life, and among shrewd men, he must meet. Aud thus he, for at least five years, will take a post-graduate course, which will fit him for a wide-awake citizenship. Sad is it that those who taught him medicine were ignorant of country or town practice—mere professors, book-worms, non-practical men, considered wise only by those who were and are students, who, unless under salary, would starve if engaged in ordinary practice. However, most luckily, there comes out one instructor—only one—who, with several years' experience in country practice, instructs his class

and tells its members some stubborn facts. Are such lectures well received and considered of much importance? If you are in doubt, ask the student, and he, and every old doctor, will tell you without hesitation that the lack of such heart-to-heart talks on medical life-work has been, and is, disastrous to many young doctors.

Those who are graduated from our theological colleges, as a rule, are taught by practical men, who have preached Christ in every atmosphere and in diverse communities.

Those who practise as barristers, in their studies and during their whole student life are continuously surrounded by examples and instruction, fully qualifying them for entrance to practice, and with advantage to themselves and their clients.

In no other profession, or calling, or trade, does he who is pronounced qualified commence his life-work as ignorant of what may be termed ethics as the young doctor, whose profession is the most expensive to acquire, and whose work is the most exacting. No honorable interest or organization has ever existed, or can exist, unless those connected with it have been, or are, devoting their undivided attention to it, and have had practical experience of sufficient duration as to become awakened in knowledge to every condition existing or that possibly may exist, threatening or may threaten, and zealous to encourage those who look up and lift up.

Yes, those who are to sit in our Medical Councils should be those who are in practice, and know full well the views of their fellow-M.D.'s, for, it is said, too many there have been so connected who were absorbed in other interests, and in their homes were unknown as practising medicine as a means of living; hence the absence of unanimity in discussions and solidarity of our profession. Those connected with the church and with law, as a rule, have no side financial interest under nursing during professional life. However, in medicine, too frequently it is observed too many there are who, in the opinion of the public, are interested, most especially in concerns and hobbies purely non-medical. Medicine, like any other profession or calling, demands our best love; if divided or neglected, the people soon learn it, and we, not only personally, but professionally, suffer. One fact is this, that to those who are in active practice in the country we must look for the ideal doctor, for he is the type of those and of whose virtues all that which has been said is worth preserving, being "Cradled in story and nursed in song."

"Because the rose must fade,
Shall I not love the rose?"

says Gilder. If there ever was a title more rapidly losing its distinction, and becoming, in the estimation of the learned, and even of the uneducated, less significant of honorable keeping and respect, the title of Doctor commands the first mention. In this deplorable condition of the title the principal encouragers of its downfall are our universities that, for money, are establishing non-professional, catchpenny and meretricious faculties for the degree-crazed rabble, whose members want recognition and seats among the mighty, and want the university seal to cheap parchments. Formerly, joint-stock medical colleges were doing a land-office business in parchments, but the larger supply institutions —our universities—are, by absorption or federation, silencing the disgrace; but other faker institutions are rapidly arising, and the *Doctorate* is the cheap and gilded prize. The dignity of our universities, too, is equally and as rapidly losing its former standing, and the fellows of Oxford or of Cambridge lament the prostitution of the words, *university* and *doctor*. Queen's University, the Oxford of Canada, is to be congratulated, inasmuch as she is the conservatory for and of time-honored degrees, an exemplar of purity to many universities, so-styled, that are doing a departmental store business with bargain counters and bargain days announced.

The matriculation requirements for medicine, in the earlier days of Oxford and Cambridge, in fact of all European universities, were such as related to the possession of the degree of M.A., and a candidate not in the possession of this degree in arts was precluded from inceptingas a doctor. Four years' devotion to medicine Oxford demanded of each M.A. candidate.

To-day, several of our universities, apparently considering pharmacy, dentistry, forestry and pedagogics as equivalents to medicine, demand from their students a matriculation equivalent to that for the arts course. However, Harvard and Yale, during recent years, have demanded what Oxford, in 1432, instituted, and by this act are placing medicine in its former honored position, an example worth adoption by all universities and licensing boards or colleges, if our profession is to be considered worthy to be enrolled and conserved as a learned profession, and to be freed from association with inferior callings, or those not recognized, even by the public, as equally learned or of equal standing, socially or professionally, or of similar worth to the commonwealth. Confirmation is afforded me of the desirability of an arts degree as a preliminary requirement for medicine by examination of fifteen hundred well-advanced students, among whom I found no great difficulty in the recognition

of those who had received classical training, or were pursuing studies embraced in the two courses—a fairly laudable alternative, yet, in semblance, savoring of mercantile life, wherein a silver spoon is presented the purchaser of a pound of baking soda.

"Consistency," says Emerson, "is the hobgoblin of little minds."

If medicine, and by it I mean the profession, is to occupy its time-honored position among men, and those honorably connected with it are to act as conservators of its hallowed name and interests, it certainly is the duty of our universities and members of the profession to offer encouragement to none but the best of young men towards entering the course in medicine. When, during my late examinations for our Medical Council, I experienced much regret to examine a score at least of applicants, whose facial expressions, conversation and general appearance were so repugnant as "wad spean a foal," or equally intimidate one as if "catched wi' warlocks i' the mirk." My reflections and opinions were that such candidates, or their guardians, had not too exalted opinions of medicine and its respectability. However, my heart rejoiced in many instances to see before me the very elect of manhood—and of womanhood—as an overwhelming majority, and I did feel satisfied the dear people and their dependents were willing, and proud of it, that the doctorate should be in their families, and that the future of medicine was safe in the zealous and safe custody of our future Oslers, Bakers, or Fergusons, for they evidently claimed the best of parentage, and were classical scholars of no mean order.

Selected Articles.

THE MODERN TREATMENT OF SYPHILIS.

By Dr. Martin Friedlander,
Director of Lassar's Clinic, Berlin.

Recent research in the domain of syphilis has real and considerable advance to show. The *Spirocheta pallida* is now generally recognized as the exciting agency of syphilis, and the significance of Wassermann's reaction, for establishing the presence of active syphilis, is now scarcely disputed. It would be impossible for an important institution, which desired to maintain its high standing, to allow these eminently valuable discoveries to pass unnoticed. And accordingly, it has now been adopted by the Lassar Clinic as an invariable practice in cases which are not unequivocally certain cases of syphilis, to search for the spirochete by means of the Giemsa stain, either in sections or in the dark field, and to test the blood of all patients coming under observation suffering from syphilis, to ascertain whether it reacts positively or negatively to the Wassermann reaction.

The success of these new methods of observation is truly astonishing. Thus, the microscope proves at one time an apparently soft chance to be specifically infected, and at another time an indurated ulcer is proved to be free from spirochetes; while a suspected case of syphilis may be established as such, so that its treatment can be begun without any need to await the appearance of the secondary manifestations, and the patient is spared both time and the diagnostic roseola. But the serum investigation proved itself of almost greater value than the microscope. Formerly, in cases where no obvious characteristics manifested themselves, we were compelled to give our subjective opinion to the patient, as to the nature of his malady, almost at hazard; but at the present day, basing our opinion on the chemico-biological reaction, we are enabled to say definitely, syphilis is, or is not, present.

It is impossible to enumerate and go into all the questions which arise as a result of this discovery. But, if we have out of a number of cases certain patients who desire to undergo a so-called precautionary treatment, we are enabled, by obtaining a negative reaction, to relieve them of the necessity of sub-

mitting to it; while, in other instances, after obtaining a positive reaction, we must insist on a thorough treatment being carried out even by patients who have regarded themselves as already cured. Further, it is possible in the case of a child to establish that it is suffering from an hereditary syphilitic affection, and to compel its parents, in spite of previous denial, ultimately to confess the infection, more especially when a positive reaction has also been demonstrated in them. How important is this test for young people on the eve of marriage, how valuable in medico-legal cases, and what a brilliant agent have we at our disposal to show us whether our treatment is, or is not, effectual!

And now with regard to treatment; have we in this respect obtained success commensurate with that obtained in the investigation of the disease itself? For the two agencies which for long have availed as specifics against syphilis we have to thank Empiricism; but they have proved their worth in the face of the most strict inquiry as to their usefulness, and we can indeed show that by their rational employment we can cause both the spirochetes and the positive reaction to disappear. But what do we mean by the term "rational" treatment? We mean that we do not employ mercury in a mechanical way, always in the same quantity, always in the same form, with the same intervals, but that we employ it with discrimination, either using it alone or in combination with other therapeutic agencies, such as baths, sulphur, sweating cures, rest or exercise, diet, decoctions of drugs, or other means. The forms in which we use mercury are either those of inunction or injection, with soluble or insoluble salts; or we employ the drug internally. The last method has hitherto, perhaps, not gained many supporters, because the agents utilized, as calomel or tannate of mercury, or iodide of mercury, have either irritated the alimentary canal too much or produced too many oral manifestations, and have, accordingly, been too feeble in efficacy. More recently, as we were compelled to make use of the internal treatment in a series of cases, our attention was directed towards a new preparation called mergal. This substance is a cholic acid-mercury oxide combined with tannate of albumen, and is dispensed in small easily taken capsules. It has already found numerous advocates, and we have ourselves used it in appropriate cases. We are able to state that it is well borne, has proved itself powerfully active against syphilis, although the inunction and injec-

tion methods remain the routine practice. This organic mercury preparation, mergal, has, however, the advantage over the other and inorganic mercury preparations that it is easily assimilable, and in no way irritates the alimentary canal. Patients can remain long under this method of treatment quite comfortably, and do not suffer from the disagreeable inconveniences attending other methods, and this, in the case of better-class patients, is a matter of the highest importance.

And what is the position of affairs as regards the activity of the iodine preparations? Formerly these used to be regarded as being devoid of importance, or, at the most, merely helpful in the matter of facilitating the diffusion of the ingested mercury more quickly through the body. This view has, however, been revised. Iodides are, on account of their own properties, of therapeutic value in syphilis. Unfortunately there stand in the way of their extensive use numerous disadvantageous circumstances, and, especially in certain persons, the tendency to acne and furunculosis, even when the smallest doses are taken, on account of the irritation of the sebaceous glands by the excreted iodine. Further, iodism may occur in the form of increased secretion and hyperemia of all the mucous surfaces, and finally the bad taste pertaining to the most commonly employed preparation, viz., potassium iodide, and its unpleasant action on the stomach and heart are also disadvantages. For these reasons there are many substitution preparations, but these have either the self-same drawbacks or possess less potency. After making many comparative tests we have therefore come to this in the treatment of cases by internal medication, that we order the effervescing preparations of iodine instead of potassium iodide when this drug is not well borne; and, if internal medication is not deemed advisable, or if we desire a particularly strong iodide action—and both these desirata are met with in the gravest cases of affection of the brain and spinal cord—we employ injections of iodipin in 25 per cent. solution directly into the muscles. Iodipin is a combination of iodine and sesame oil. This drug has proved beneficial in severe cases of syphilitic diseases, and has been employed with the best results in English hospitals, as I have recently read. Iodipin is also put up in the form of tablets, and is to be preferred to iodide of potash, just as in modern therapy the organic preparations are to be preferred on account of their greater readiness of assimilation.

To summarize, then, we may say that there has been definite

progress made in the therapy of syphilis, that success is only attained as a result of numerous comparative investigations to determine with exactitude the best preparations to use, their most appropriate forms, their combinations and modifications needful in each individual case; and also the duration of treatment.—*Folia Therapeutica.*

A NOTE ON CONJUGAL DIABETES

By Alfred C. Croftan, M.D., Chicago.

During the last three years I have had the opportunity of observing six instances of diabetes occurring together in man and wife. The first case was discovered by chance, because the wife, fearing that the disease might be contagious, brought her urine for examination. The other five cases were all discovered within the short interval of two years and three months, presumably because, interested by the discovery of the first case, I have since then, whenever possible, examined the urine of the consort of a diabetic for sugar; if no sugar was discoverable in a random specimen, then another test for alimentary glycosuria was made according to the usual method.

The six cases were found among a total of 241 diabetics, i.e., in 2.49 per cent. Inasmuch as forty-seven of the patients with diabetes were not married, or had lost their consort, my six instances of conjugal diabetes actually constitute approximately 3 per cent. of the married diabetics studied.

In looking through the literature on this subject, numerous instances of conjugal or "domestic" diabetes are found. All in all, I have been able to collect 162 cases; these are all instances in which the coincidence of diabetes in husband and wife was so striking that the possibility of a contagion was thought of.

That one is dealing in most of the cases with more than a coincidence is clear; such a thing may occur by chance; but in my series, for instance, in which glycosuria was regularly looked for in the consort, the proportion of instances discovered is far too great to warrant the inference that this is the case. One must think of common errors of alimentation obtaining in a family, or of common errors of living, of exposure to common nervous, mental, and emotional influences. One must think finally of con-

tagion. Syphilis and malaria can produce glycosuria; also certain other contagious and infectious disorders of known type that cause vascular degenerations in important organs (liver, pancreas, nervous system) concerned in sugar metabolism.

It is not impossible that other infectious agents of unknown character and origin may be concerned in the transmission at least of certain types of diabetes. This subject is well worthy of further study; it is a corollary of the contagious theory of gout, that is gaining many adherents. To deny the possibility of a contagious diabetes on the one hand is precarious; to affirm its existence, on the other, altogether premature.—*New York Medical Journal.*

MYCOTIC INFECTION OF THE VAGINA

By Flora Pollack, M.D., Baltimore.

Although the presence of mycelium in the vaginal secretion of women is of rather common occurrence, 42 times in 685 vaginal examinations, or 6.90 per cent., its pathological importance is very low indeed. Von Herff and Hausman never found it in a virgin, and Von Herff in Frauen Poliklinik in Halle in a six-year service found but 24 cases in 13,283, or one in 553, and that has been about the experience in the Johns Hopkins Hospital Dispensary, in the Women's Venereal Department, in which but three cases with pathological symptoms were discovered; so that in a series of 685 vaginal examinations, 42 contained the fungi. Of these, but three had symptoms, one of these in a young (15-year-old) white virgin, and two in colored women, both parous, but not pregnant. Von Herff found that pregnancy and the summer heat predisposed to it, and that the infection was often conveyed to the mother from a child suffering with thrush. In an experience so small it is, of course, impossible to draw conclusions, as in Von Herff's interesting series. It is said to be at times intractable to treatment, though usually the acute cases recover promptly after the applications of mild antiseptics.

The symptoms are intense itching, burning or pains, with or without irritability of the bladder. The diagnosis is easily made microscopically, in which the dense white membrane, which may suggest diphtheritic membrane, consists of mycelium and spores,

and epithelial cells, is easily removed from the intensely injected mucous membrane of the vulva vestibule, or may cover the entire vaginal canal as a cast, as occurred in the young girl of 15 in my group of cases. It usually occurs as white or yellowish patches, which, as said before, can be easily removed without leaving bleeding areas. I have been able to grow the fungus in agaragar and glucoseagar and potato and milk, where it has grown luxuraintly for a short time, too short to isolate it from the other bacteria, in order to determine the species. Although it grows rapidly, it is soon killed by other organisms, which is one of the reasons which Von Herff gives for its rarity as a pathological factor.—*Maryland Medical Journal.*

VACCINATION AGAINST PLAGUE.

Fornario (*Annales de l'Institut Pasteur*), publishes the report of his attempts to immunize guinea pigs and rabbits by the administration of plague bacilli by the mouth and by the rectum. He comes to the following conclusions: (1) It is possible to immunise animals against plague by administering by the mouth small doses either of virulent cultures or of cultures warmed to 53 deg. for an hour and a half. Two-thirds of the animals thus treated resisted a subcutaneous inoculation fatal to control animals. (2) Limited immunity can be gained by rectal administration. (3) In animals thus vaccinated specific anti-bodies appear very rapidly in the blood. (4) The opsonic index remains higher in vaccinated animals than in controls when subjected to a virulent subuctaneous or intravenous inoculation. (5) The injected plague bacilli are almost completely destroyed in the digestive tract of the vaccinated animals.—*The Medical Press and Circular.*

Meeting of Medical Societies.

AMERICAN PROCTOLOGIC SOCIETY

(CONTINUED FROM LAST ISSUE)

"SIX CASES OF PROFOUND SECONDARY ANEMIA DUE TO BLEEDING INTERNAL HEMORRHOIDS; AND ONE CASE OF NECROSIS OF THE RECTUM AS A RESULT OF SELF-TREATMENT,"

were reported by Dr. Dwight H. Murray, of Syracuse, New York, who held that the profession was not entirely blameless for the serious results which occurred in this class of cases, because it is looked upon by the laity as a matter of no serious moment, and in many cases the physician does not insist upon a thorough examination and prompt treatment.

The first case reported was one of bleeding hemorrhoids, secondary anemia, delirium, amnesic aphasia and other critical symptoms. A good recovery was the result of the operation.

The second case was one of hemorrhoids and a villous polypus resulting in profound anemia, heart weakness and a general appearance resembling that of malignant disease. This case made a full recovery following operation.

The third, fourth and fifth cases resulted in profound anemia, weakness, melancholia, and invalidism, all making a good recovery after an operation.

The sixth case had been long neglected and died as a result of the profound anemia two days after he was first seen by the author and before the patient consented to an operation. The examination showed: Hemoglobin, 10 per cent., and red blood corpuscles 1,000,000.

The author held that in cases of bleeding internal hemorrhoids patients may lose more in ten minutes than can be recovered in as many days, and that surgeons were not justified in delaying an operation, also that it would be far better for the physician in charge to withdraw from the case, if such a patient refuses to follow his advice, when he believes that an operation is necessary.

The author believes that the primary cause in many cases of

secondary anemia can be found, if sought, in the last three feet of the intestinal canal.

The cases of necrosis of the rectum was caused by the injection of two-thirds of a teaspoonful of headlight oil, upon retiring every night, over a period of several weeks. The treatment was recommended to him by a fellow employee. The case made a good recovery, and at this time, five years after the operation, no stricture of the rectum has resulted.

"Spontaneous Intestinal Anastomosis."

By Dr. James P. Tuttle, New York City,

whose paper consisted in a discussion of the means by which nature overcomes intestinal obstructions through spontaneous anastomosis. Four cases were reported in which the obstruction suddenly gave away, and the patients lived for various periods, with more or less regular movements of the bowels. These movements were afterward shown in one case by autopsy, and in two cases by operative interference, to have taken place by spontaneous lateral anastomosis between different portions of the bowel. The fourth case was never operated upon, but being at the point of death, with great abdominal distention and inflammation, was relieved by some sort of giving away of the obstruction and eventually recovered. This patient had suffered from colitis and fecal stasis high up for a long time; since this experience, however, these symptoms have disappeared and she has remained entirely well.

"Mesosigmoidopexy with Reports of Two Cases,"

was the title of a paper by Dr. Louis J. Hirschman, Detroit, Mich.

After defining the different forms of prolapse of the rectum, the author called attention to the unsatisfactory results so far attained in the various suspension operations for prolapse of the third degree. He argued that as in operations on the retroverted uterus, the shortening of the natural supports of the womb has superseded the illogical attachment to the anterior abdominal wall. He hoped that the mesentery, the natural support of the bowel, will be used to replace the old fixation methods used heretofore.

He reported two cases suffering from prolapse of the rectum and sigmoid of the third degree, both of whom had had other operative measures performed without satisfactory re-

sults. These two cases were operated on with entire relief by the author's method of mesosigmoidopexy—the technique of which is as follows:

Under hyoscine and morphine anesthesia, fortified with a small quantity of chloroform, the abdomen was opened a little to the left of the median line, the incision paralleling Poupart's ligament. Nearly one-half of the sigmoid flexure was found telescoped into the rectum, and the space formally occupied by the uterus filled with the rest of the prolapsed sigmoid. The stump of the right broad ligament was found firmly attached to the sigmoid, thus holding the lower part of it in the prolapsed condition. The mesentery of the sigmoid was very much elongated, allowing the bowel to remain in the lower pelvis. The adhesion to the stumps of the ligament was separated, and the stump of the broad ligament covered over the peritoneum, the prolapsed bowel lifted out of the pelvis, and the outer surfaces of the mesentery of the large loop of the sigmoid lightly scarified. Beginning toward its deep attachment (about six inches from the bowel in this case) the two opposing surfaces of the meso-sigmoid were brought together by interrupted 20-day catgut sutures (No. 2). Three rows about an inch apart were placed in this manner, the upper row being three inches from the bowel. As the sutures were tied the sigmoid and the rectum were lifted from their prolapsed position.

For fear that the curve of the loop might be lessened, and possible kinking take place (a rather remote possibility on account of the strength of the adhesions), the longitudinal muscular band of the sigmoid, together with an eighth of an inch of the serous and muscular coats of the bowel on either side of the band, was rolled in upon itself by transverse interrupted catgut sutures, placed threequarter inches apart around the curve, and for two inches beyond at each side. This rolling in of the muscular band made a rib of firm, muscular tissue which materially increased the size of the curve, and greatly strengthened it.

The scarification of the sutured surfaces of the meso-sigmoid assured us of an adhesive surface of over 18 square inches, and yet allowed perfect motility of the organ. The abdomen was closed, the retocele reduced and repaired, and the prolapsed anal mucous membrane resected.

In the after-care of these cases the patient is kept confined in bed on a restricted assimilable fluid diet, and the bowels not

allowed to move for about ten days. At the end of that time the diet is gradually increased but the patient not allowed to get out of bed and walk until the end of the fourth week.

In the two cases reported by the author in his paper, reports from the patients six and eighteen months afterwards respectively, evidenced the fact that they were in perfect health, and both having natural normal bowel movements without assistance.

While these patients were women, the same condition occurs in men and the same technique is applicable to them.

"Primary Melanotic Sarcoma of the Rectum and Anus, with Report of Two Cases."

Louis J. Krouse read a paper on the above subject, and stated that very little space or none at all has been devoted to this subject in works on general surgery. He quotes what the various authors on diseases of the rectum say in reference to this class of new formations. He has gathered together the reports of this disease, and has found altogether sixty cases.

In forty-five cases, in which the age and sex of the patients were specified, there were 28 males and only 17 females. No decade was exempt except the first—the youngest being a boy, aged seventeen; and the oldest, a man aged seventy-five. That it was more prevalent in the sixth decade, being a disease of the middle period of life and old age. The average age being forty-nine and five months.

He concludes his paper with the suggestion that as the course of the disease is so malignant, extirpation is the only rational thing to be done. Not only should the neoplasm be removed thoroughly but a good deal of healthy tissue should be sacrificed. Should the tumor be located at or near the anus, the sphincters as well as the inguinal gland should be extirpated.

"Some Colonic, Sigmoidal and Rectal Conditions."

By Dr. Edwin A. Hamilton, Columbus, Ohio,

who stated that the ascending, and a portion of transverse colon have to do with absorption of the fluids of the digestive tube. The descending colon and sigmoid are concerned with storing fecal debris. There are changes in the intestinal wall of the descending colon, sigmoid and rectum which are due to

the function of these parts. On account of the stagnation, fermentation and putrefaction in the contained mass, toxins and bacteria, under conditions favorable to this process, pass through the mucosa into the wall of the bowel. The result of this permeation of the wall of the intestine is an irritation which brings on a round cell infiltration of its layers. This infiltration diminishes the elasticity of the viscus, and by its slow but inevitable contraction diminishes its lumen. This same process of round cell infiltration may attack the mesenteries of these various divisions of the bowel, and cause thickening and contraction of them. The main symptoms of this condition is prolonged and intractable constipation with all its morbid sequellæ.

After fibrosis has occurred the affected area may be palpated, if the abdominal walls are relaxed. It is needless to remark that all accessible viscera must be investigated, and every other cause of the constipated state must be eliminated. Treatment comes under the hygienic, in which diet and colonic lavage occupies a very prominent position.

Surgery must be invoked in the advanced cases when the fibrosis is marked. Any part or all of the colon except the part concerned in the absorption of fluids, may be removed. Metchnikoff is a prominent advocate of the idea that the colon is the territory from which most of the poisons which destroy the body originate, and that if man possessed no storehouse in which digestion debris may stagnate and putrefy he would be a much more physically perfect animal. So that we may not hesitate to remove any portion of the large bowel no matter how extensive that portion may be, when, it has already lost what little functional value it originally possessed.

"Rectal Diseases." A Report of Three Cases: "Condyloma, Lipoma and Foreign Body"

was the title of a paper read by Dr. Lewis H. Adler, Jr., who stated in reference to condyloma that two varieties were recognized—one being of syphilitic origin, called condyloma latum; and, the other condyloma acuminatum, due to irritating discharges of a non-specific source, such as gonorrhea, leuchorrhea and chancroid. The latter form was the variety concerned in the case reported; the patient evidently acquiring the trouble in the practice of sodomy.

The essential peculiarity of the case under consideration

being that the numerous cauliflower growths encircling the anus—some being large and others small—was the fact that not only had the growths involved the cutaneous surface, but also that they existed within the bowel upon the mucous membrane. The latter, it is true, were quite minute and might have been overlooked by a superficial examination. All of the excrescences, even the smallest, were pedunculated.

The treatment consisted in the removal of the larger growths by scissors and cauterizing their bases with a paquelin cautery. The smaller growths were destroyed simply by the application of the cautery point. To prevent pain due to the cauterization, the parts were sprinkled liberally with bicarbonate of soda, as recommended by Dr. Jas. P. Tuttle.

The patient made an uneventful recovery.

Case II.—The case of lipoma was not exceptional except for the fact of its occurrence in the ischio-rectal fossa, and that it could be pressed backward and forward through a ring of firm tissue, which ring could be distinctly felt surrounding the tumor, and through which it glided back and forth.

The growth was removed under ether anesthesia, and was found to extend well up in the ischio-rectal fossa on the right side. The redundant skin was excised, and the wound brought together with silk-worm gut sutures.

The recovery was uneventful.

Case III.—A very remarkable instance of a foreign body in the rectum was that of a woman, aged 42, who had consulted Dr. J. J. McLaughlin, of Philadelphia, and then through the doctor, the writer of the paper.

She had reason, about six years previous to seeing Dr. McLaughlin, to think she was pregnant, having most of the symptoms pertaining thereto—suppression of menses, enlarged abdomen, morning nausea, etc. For about six months she did not menstruate. At no time did she experience fœtal movements. About six months from the cessation of menstruation, the flow returned, and she again became regular in this respect. The physician she was then seeing, informed her that he thought she had a false conception. Two years later she went South and contracted a diarrhea which kept her under the care of physicians, almost constantly, but without experiencing any permanent relief. Six months prior to seeing the author of the paper she had experienced considerable tenesmus within the rectum—the pain being confined to no one point, but was experienced low down in the pelvis, and

about the rectum. Sometimes a dozen paroxysms would occur in a day. The diarrhea still continued, many movements occurring in the twenty-four hours.

At no time was there any bleeding from the bowel, and she was not affected with any protrusion, such as piles, etc. About two months before she saw the author of the paper, she passed from the rectum what she termed "a bunch of bones," and a month later a piece of skull.

Upon consulting Dr. McLaughlin the patient was carefully examined by him and a diagnosis made, which was subsequently confirmed by the author.

At the time of the examination the patient showed marked evidence of being poorly nourished, weighing about 75 pounds, her usual weight prior to this trouble being over 100. Digital exploration of the rectum revealed a mass situated about four inches up the bowel anteriorly, which felt very much like the united halves of an open clam-shell, the pieces being sharp and exposed. Extreme care had to be used to avoid cutting or injury to the examining finger. The tissues in which the mass was embedded were greatly hypertrophied. A few small pieces of bone were removed at this time, but it was soon evident that the larger mass could not be extracted except under general anesthesia.

The patient, therefore, was admitted into the Polyclinic Hospital, and under ether, the sphincter was dilated, and the mass of bones removed which proved to be in large part, frontal bones. It was only by the exercise of the utmost care and skilful manipulation of the fingers that some of the larger pieces were removed without injury to the patient or surgeon.

The after treatment consisted in cleaning the parts thoroughly several times a day, with a two per cent. creoline solution.

The patient made an uneventful recovery, and in six months gained about twenty-five pounds, and since the operation has had no diarrhea.

The cause of the condition was uncertain. Two causes naturally presented themselves—a dermoid cyst or the product of an extra-uterine fœtation. As the essential symptoms of the dermoid cyst were not present, and, in view of the previous history, the opinion was expressed by the writer that her condition was probably due to the latter cause.

Progress of Medical Science.

MEDICINE.

IN CHARGE OF W. H. B. AIKINS, F. A. CLARKSON, AND BREFNEY O'REILLY.

"Suprarenal Capsules."

The Oliver-Sharpey lectures, by E. A. Schafer, are published in full in the British Medical Journals of June, 1908, and deal with the present condition of our knowledge of the functions of the above organs.

Schafer just gives a brief account of the earlier investigations, beginning with Addison, who, in 1855, described the disease known by his name, and its pathology. Brown-Sequard in the following year removed these glands in animals producing symptoms identical with those described by Addison, minus pigmentation, which terminated fatally. Curiously enough many early observers were unable to produce the same results, as they used white rats, which animals apparently have accessory subcutaneous glands, and are able to withstand extirpation of the suprarenals.

Little experimental work was attempted until, in 1883, Pellacani and Foa injected an extract of the gland, but they supposed the results obtained were due to alteration in the coagulating power of the blood. It was not until Oliver and Schafer, in 1894, with the aid of instruments showed its effect on blood pressure. In the year preceding, Langlois and Chassevant demonstrated that the blood in the capsular vein contains more oxygen, plus an active principle, and less CO_2 than ordinary venous blood; also they found granules in the medullary sinus which gave the same reactions as those found in the chromophilic cells of the medullary parenchyma, strong evidence that a secretion is passed into the blood from the gland itself. As regards development it has been proved that the cortex is mesodermic in origin, and the medulla arises from the same blastema as the sympathetic ganglia. The researches into the properties of suprarenal extract culminated in 1901, when Takamine, a Japanese, isolated the active principle in

crystalline form (adrenalin); finally Stöltz, in 1907, synthesized a material ($C_9 H_{13} NO_3$), said to possess all the essential properties of suprarenal extract.

Oliver and Schafer in their experiments on the effect on blood pressure, showed a marked increase due to vaso-constriction, and increased rate and energy of the heart, even if minute doses only were administered, altogether independent of the nervous system, the substance is apparently not excreted in the urine but probably stored in the skeletal muscles; they also showed that an extract of the cortex is inert.

Its local action and therapeutic value were unrecognized until 1896. As far as Addison's disease is concerned the results have been disappointing, the amelioration of symptoms being transient.

The relation between diabetes and the function of the suprarenal yet requires investigation. Lowe finds that the extract dropped into the conjunctive in diabetics, with diseased pancreas, produces dilatation of the pupil, whereas in the normal individual no such reaction occurs, and suggests this test in pancreatic diabetes.

Shafer concludes his most interesting paper by a reference to "Hormanes." From analogy we have some justification for inferring that the cortex may yield a hormane which influences certain other organs; possibly Schafer suggests the generative organs as integumentary tissues.

Pseudo-Leukemia.

La Roy, from the clinical and histological study of six cases of pseudo-leukemia, enters into a minute description of this disease.

It may arise in any part of the organism where lymphoid tissue exists, but generally begins in the gangliowary system. A single ganglion becomes large and hard, but remains indolent and moveable. The neighboring glands are similarly affected, and become blended with the first in a large mass. This mass does not become caseous, but may ulcerate into the neighboring muscles and bones. The first glandular enlargement is generally in the neck, afterwards in the inguinal, mediastinal and axillary regions. The spleen is always much swollen. With the adenopathy, the fever appears. The blood presents no changes. The disease may lessen under a reconstructive treatment, or it may gradually lead to a serious cachexia.

At the autopsy one finds many ganglion masses. The spleen is

large, sometimes enormous, and hard. Histologically, the characteristic lesion seems to consist of nodules, rich in polymorphous cells. Some foci of caseification are seen; also, here and there, typical miliary tubercles.

The histological aspect of the lesions permits one to differentiate between this form of pseudo-leukemia and the true pseudo-leukemia, in which there exists a hyperplasia of the lymphoid tissue. There is also a difference in etiology between the two. The former is probably dependent on tuberculosis. The Roentgen rays, which are helpful in many forms of true pseudo-leukemia, do not produce any results in the tubercular form. In the latter, surgical treatment is preferable. An absolute or relative lymphocytosis is a sure sign of true pseudo-leukemia; in the other form there is an absence of lymphocytosis. In the latter there is generally rise of temperature. The hard lymphomata are tubercular. The hemorrhagic diathesis is rare in the tubercular form, frequent in the true pseudo-leukemia. Lesions of the retina, frequent in the true, are not found in the tubercular.—*Translated from Giornale Internazionale delle Scienze Mediche by Harley Smith.*

The Diagnosis of Diaphragmatic Pleurisy.

According to Schrwald (Dent. Med. Woch.), the chief points upon which is founded such a diagnosis are the following:

1. A lessened fulness of the diaphragmatic excursions, and, consequently, short, frequent respirations, dyspnoea, sometimes so intense as to amount to orthopnoea.

2. Frequently, violent pains, which are produced during the movements of the diaphragm (breathing, coughing, sighing, etc.). The pains are localized at the diaphragmatic insertion, and also at the whole lower opening of the thorax. Severe pain, on pressure, may be found at these four points:

(a) Anterior diaphragmatic point;

(b) Epigastric point;

(c) Along the twelfth rib;

(d) Posterior diaphragmatic point (in the eleventh intercostal space, near the vertebral column).

The pains may extend to the shoulder and the neck. Pressure between the two points of insertion of the sterno-cleido-mastoid may cause pain.

Sometimes there is pain during deglutition (due to passage of the food through the esophageal foramen of the diaphragm).

3. Cough is frequent. If the disease is on the left side, there

will occur gastric phenomena, as pain and vomiting. Sometimes one will discover the abdominal respiratory reflex, formed thus: In deep inspiration, at the end of the act, there is a rapid contraction in the upper portion of the abdominal rectus on the right side, which may extend as far as the fifth intercostal space.

4. One may find friction sounds over the diaphragm. Sometimes peritonitis is produced.—*Translated from Giornale Intern. delleScienze Mediche by Harley Smith.*

The Respiratory Murmur.

H. D. Arnold, Boston, (*Journal A. M. A.,*) criticises the modern teachings as to physical signs in the text-books, as failing to discriminate between unfounded theories and established facts and ignoring the physical laws on which their explanation should be based. There are, it is true, many points that we cannot thus solve at present, but we can be more truly scientific and less traditional in our ideas. To illustrate his views, he takes up the subject of the respiratory murmur, in regard to which there are contradictory opinions as to the reason why there should be two types of breathing sounds, a question that can be solved by physical experiments. more easily than the physiologist can investigate the digestive processes. The respiratory murmur with its modifications, he shows, is rationably explainable according to the laws of physics by recognising it as originating at two points, the glottis and the point where the minute bronchus opens into the air sac. From these its transmission depends on the structures and passages through which the vibrations are conducted, and with a knowledge of the physical laws of sound conduction and of the structural and gross anatomy, one obtains an understanding of the complex combinations of sounds in health and readily translates the variations that come with disease into terms of changes in the texture of the lung tissue. This is the real aim of auscultation of the respiratory murmur—to learn the texture of the lung tissue. Arnold gives his explanation in detail of the physical mechanism of the different changes in the respiratory sounds, and while he does not claim that it is necessarily correct, as it has not been experimentally demonstrated to be so, it is consistent with the laws of physics and offers an intelligent basis from which to carry out further investigations which shall confirm or disprove it.

Aneurism of the Heart.

J. B. McElroy, Memphis, Tenn., (*Journal A. M. A.,*) gives a detailed history of a case of aneurism of the cardiac wall, with autopsy. He concludes from his study of the literature and his observation in this case, that the most probable frequent cause is myocardial fibrosis resulting from interference with the circulation in the coronary arteries, which were sclerotic and had their orifices contracted in his patient. This, he says, also explains the most frequent seat of the aneurism, which is in the apical third of the left ventricle and the most frequently on the anterior surface. The death of his patient was due to cardiac insufficiency from myocarditis. There was also, in his case very extensive mediastinopericarditis, clearly recent in all parts except over the aneurism, indicating its secondary character. The aneurism was five inches in lateral width and three in depth and its communication with the left ventricle was marked by a well defined fibrous ring, two inches in diameter. The diagnosis of aneurism was made antemortem.

OBSTETRICS AND GYNECOLOGY.

IN CHARGE OF ADAM H. WRIGHT, K. C. M'ILWRAITH, FRED. FENTON AND HELEN MACMURCHY.

Treatment of Myoma of the Uterus.

1. Non-Surgical Treatment.

If a patient has only a small myoma, which is not growing, not causing pain, severe hemorrhage, or interference with her health or comfort we are not justified in advising her to undergo an operation.

It is important that a patient, with a troublesome myoma, should rest as much as possible. During the period, she should stay absolutely in bed. If there be a tendency to flooding, the foot of the bed should be raised, from twelve to

eighteen inches, on blocks. In the intervals between the periods, she must avoid all strain and fatigue.

The patient should be forbidden to wear corsets, as they tend to press the tumor down into the pelvis. On the other hand, the wearing of a light abdominal belt is sometimes beneficial.

The treatment of myoma by drugs is unsatisfactory, and resolves itself into the alleviation of symptoms. By far the most important of these is hemorrhage.

Ergot is our chief remedy for the control of the bleeding; and, in many cases, is of great value. It excites the contractions of the uterine muscle, and, by pressing together the opposing surfaces of the mucosa, checks excessive bleeding. To some extent, it also acts by causing contractions of the small artereoles. I know of many cases, where patients have taken ergot in drachm doses thrice a day for years; and I have never seen it produce ergotism. Its use, however, is not free from objection. As Dr. Thomas Wilson has pointed out, when the heart muscle is degenerated, ergot is contra-indicated. It contracts the artereoles all over the body, and so increases the resistance to the left ventricle.

Hydrastis is often prescribed with ergot in the form of tablets. It is an astringent to the uterine mucosa, and so helps to check the menorrhagia and leucorrhea due to the endometritis so often present. As far as I know, it has no direct effect on a fibroid.

A myomatous woman should keep her bowels well open, as constipation tends to increase congestion of the uterus, through scybala pressing on the ovarian veins.

Plugging the uterus and vagina is of great help in controlling dangerous bleeding. It may tide a patient over a bad flooding, and allow her to gain some strength before undergoing an operation. When called to a patient collapsed, blanched, and nearly pulseless from uterine hemorrhage, it is madness to attempt a big surgical operation such as hysterectomy. The best treatment is to put her on her side, pass a Sims speculum, and draw down the cervix with vulsella. If the cervix be found dilated, the uterine cavity should be firmly plugged with a long strip of iodoform gauze. The first few inches of gauze may be soaked, with advantage, in a solution of adrenaline. The rest of the vagina should then be firmly plugged with some antiseptic material, such as iodoform gauze, or dry boracic lint. A firm abdominal binder should be applied to exert counter-pressure on the uterus. The plugging should be re-

moved from the uterus and vagina every forty-eight hours, and fresh material reapplied. In this way, the bleeding is controlled, and the patient given time to rally. Should the myoma be submucous (and these are the cases in which there is most bleeding), the gauze packing slowly dilates the cervix, and renders easy the subsequent removal of the growth.

It is most unwise to apply styptics, such as alum or perchloride of iron, to the interior of the uterus to check bleeding. They lead to the formation of hard clots, which, decomposing, cause sepsis, and precipitate the onset of necrosis.

2. Surgical Treatment.

CONTRA INDICATIONS TO OPERATION.

I would not advise an operation:

(1) Where the tumor is smaller than an orange, is causing no symptoms, and is not growing.

(2) Where the patient is past the change of life, and the myoma is quiescent and causing no trouble.

(3) Where the patient is gravely ill from some other condition—such as phthisis, heart disease, or kidney disease—which will of itself prove fatal before long.

INDICATIONS FOR OPERATION.

On the other hand, an operation is called for:

(1) Where there is severe bleeding, uncontrolled by rest and ergot.

(2) Where there is rapid or persistent growth of the tumor.

(3) Where there are signs of degeneration, necrosis, or malignant disease.

(4) In many cases complicated with pregnancy.

(5) In cases complicated with gross lesions of the ovaries and tubes.

(6) Where there are marked symptoms of pressure on the urinary organs.

(7) Where the tumor is very large, and from its great bulk and weight becomes a burden.

(8) In some single women where the tumor, from its size, leads to unfounded suspicions of pregnancy, and causes the patient much unhappiness.

(9) In cases of sterility due to the presence of a myoma, which can be removed without sacrificing the uterus.—*Christopher Martin, Birmingham Med. Review (Abstract).*

Is Pubiotomy a Justifiable Operation.

At the last meeting of the American Gynecological Society, Professor Whitridge Williams read a paper on this subject, with the following conclusions:

1. In thirteen pubiotomies performed at the Johns Hopkins Hospital, there were no maternal and three fetal deaths, only one of which was attributable to the operation.

2. All patients were delivered immediately after the operation by forceps or version. There were no injuries to the bladder, three perineal, and only one deep communicating vaginal tear, notwithstaning the fact that nine of the patients were primiparæ.

3. The relative infrequency of injury to the soft parts is attributed to the employment of Doderlein's technic, but particularly to extensive, preliminary, manual dilatation of the vagina and perineum.

4. The after-treatment is not so onerous, as is generally stated and is greatly facilitated by the use of the Bradford frame. Immobilization of the pelvis is not necessary. The patients usually move spontaneously in bed on the third or fourth day, get up on the twentieth day, and are discharged on the thirtieth day with satisfactory locomotion. Healing generally occurs by the formation of fibrous tissue, and in at least one-fourth of the cases there is definite motility between the ends of the bone.

5. The maternal mortality should be less than 2 per cent., provided the operation is performed by competent operators upon uninfected women, who have not been exhausted by previous attempts at delivery.

6. It is indicated in contracted pelves, in which the conjugata vera does not fall below 7 cm., and after a test of several hours in the second stage of labor has shown that the disproportion between the head and the pelvis cannot be overcome, as well as certain cases of outlet contraction.

7. In multiparæ, with a history of repeated difficult labors, or in primiparæ presenting excessive disproportion, it is inferior to Cesarean section performed at the end of pregnancy, or at the onset of labor. In other cases it does not enter into competition with it, as it is the operation of choice in border-line pelves after the patient has been subjected to the test of labor, and at that time is five or six times less dangerous than Cesarean section.

8. It should replace high forceps, prophylactic version, induction of labor and craniotomy upon the living child in uninfected women.

9. It should not be employed in infected patients, or after failure to deliver by other means. It should be regarded as a primary operation, whose dangers are infection, deep tears and hemorrhage.

In the discussion that followed, Dr. Barton Cooke Hirst, of Philadelphia, said his experience led him to feel that pubiotomy would not retain a permanent place among operative procedures any more than symphyseotomy had. He predicted that, with some exceptions, in five years very few obstetricians would be doing pubiotomy. He thought Dr. Williams' objection to the induction of labor was largely theoretical, whereas those who had given it an extensive trial could not help but believe it was a most useful procedure, and ought not to be condemned, but employed more frequently than it had been. This statement was made on personal experience, including more than 200 cases, and he had had a great many more cases since. Without any special prejudice in favor of one operation over the other, his personal experience had taught him that the induction of labor was an exceedingly useful, valuable and safe procedure, and with good hygienic conditions which could be obtained in the best hospitals and private houses, with good nursing, he did not have any infant mortality when done within three weeks of gestation, as contrasted with the induction of labor at term.

Dr. Henry D. Fry, of Washington, D.C., mentioned fifteen cases of pubiotomy without a maternal death, or he might have had twenty-seven cases without a maternal death, but this did not tell half the story. It was the morbidity rate. He began this operation with a great deal of enthusiasm, and said it was one of the most gratifying operations to do in obstetric surgery. In fact, so far as the operation itself went, it was ideal. It was an easy thing to do. There were certain accidents which might happen during the operation. In the first place, tearing the anterior vaginal wall during the extraction of the child's head. Owing to the fact that the bones are not supported properly, the stretching of the tissues tore the anterior vaginal wall. One was liable to rupture the plexus of veins and get hemorrhage. The speaker would never select pubiotomy in preference to Cesarean section, provided the woman had any chance, and he would give her that chance if she had been in labor twenty-four or thirty-six hours. He would rather do it provided forceps had not been used or any efforts at version made. He would rather do Cesarean section in such cases, believing that the mortality would be no higher than that following pubiotomy, and convalescence would be much better. A complication which followed

these cases was septic phlebitis. In a series of twenty cases which he collected a year ago, twelve of them were primary, eight secondary, with four deaths in the secondary cases. If one could not do Cesarean section, then he might do pubiotomy, but he believed there was a limited field for it as a secondary operation.

Dr. Richard C. Norris, of Philadelphia, said that he was rather disposed to take a more favorable view of pubiotomy than most of the gentlemen who had spoken. He had watched its development with a great deal of interest, and in a paper he had discussed it along lines similar to those pointed out by Dr. Williams. He would differ with Dr. Williams in regard to the attitude taken by him with reference to the induction of labor. The essayist had started out with a fetal mortality for induced labor of 30 per cent., whereas, in thirty cases reported by the speaker in his own paper, the primary mortality was 10 per cent., and of that 10 per cent. there were at least four cases, if he had the matter to do over again, which he would not have subjected to induced labor, but to pubiotomy.—*American Journal of Obstetrics.*

Editorials.

FRENCH SCIENTISTS IN TORONTO.

The medical profession of Toronto had the pleasure of entertaining a very distinguished and charming party of scientists, mostly from France (twenty-three gentlemen and five ladies), on Friday, September 18th.

It happened, fortunately, that Dr. W. H. B. Aikins had a personal acquaintance with some of the delegates who live in Paris, and when there last June he heard that they had some intention of visiting Canada on their way to the Tuberculosis Congress in Washington. He conceived the happy idea of inviting them to visit Toronto. After a correspondence they accepted the invitation, but were unable to fix the date exactly. Finally Dr. Magnin, one of the secretaries of the French delegation, sent a cablegram that they would reach Toronto Thursday morning. When Dr. Aikins received this intimation he at once informed the officers of the Academy of Medicine and the authorities of the University, and, although there was little time for preparation, all worked with a will and a programme was prepared for two days. On Wednesday a telegram was received that the party could not arrive until Friday morning. This, of course, necessitated a very radical change in the arrangements, but those in charge soon decided on the form of entertainment and a programme for the day. In the party, which arrived as expected, on the morning of September 18th, were Prof. Landouzy, Dean of the Medical Faculty of Paris; Prof. Arloing, Professor of Bacteriology, University of Lyons; Prof. Pierre Teissier, Prof. Leon Bernard, Dr. Triboulet, Dr. Du Fournier, Dr. Hirschberg, M. Augustin Rey and M. Braine, of Paris; Prof. Courmont, of Lyons; M. Piot, Bey of Cairo; M. Beaumevieille, of Bois du Four, Millau; Dr. F. Cornudet, Morbihan; Dr. Chaboux, Alpes Maritimes; Dr. Paul Gallot, Thouars; Dr. Guirauden, Cette; Dr. de Kerdrel, Montferrat; Dr. Kaufmann, Angers; Dr. Migmon, Nice; Dr. Sargiron, Mont-Dore; Dr. Servant and M. André

Servant, Royat; and the ladies included Mesdames Landouzy, Eugene Lambert, Courmont, Piot and Du Fournier.

Shortly after their arrival they were given a motor drive around the city. After this drive the gentlemen went to the Medical Building of the University of Toronto, where they were entertained at luncheon by Dr. R. A. Reeve, the Dean of the Medical Faculty. At the same time the ladies were entertained by Mrs. W. H. B. Aikins. In the afternoon a reception was tendered to the guests by the Academy of Medicine in the building of the Ontario Medical Library. In the evening Dr. J. F. W. Ross, President of the Academy of Medicine, and Dr. W. H. B. Aikins entertained the delegates and a number of gentlemen of Toronto at a banquet in the Toronto Club. In addition to the delegates and the two hosts, there were present from Toronto the following: Sir Mortimer Clark, Major Macdonald, Prof. Ramsay Wright, and Drs. A. H. Wright, G. S. Ryerson, W. P. Caven, Allan Baines, A. H. Garratt, J. Ferguson, W. A. Young, Geo. Elliott, W. Oldright, G. A. Bingham, J. O. Orr, E. E. King, J. G. Wishart, A. A. Macdonald, H. J. Hamilton, R. A. Reeve, C. J. Hastings, N. A. Powell, J. A. Amyot, T. McMahon, R. J. Dwyer, Rev. J. A. McDonald and Mr. J. S. Willison. The banquet was in all respects a great success and very enjoyable. The toasts were: "The King," followed by the singing of the National Anthem; "The French Republic," followed by the singing of the "Marseillaise"; "The Lieutenant-Governor, Sir Mortimer Clark." His Honor replied in a very happy vein; "The Dean of the Medical Faculty of Paris," Prof. Landouzy. Although there were many excellent speeches during the evening, it was generally considered that Prof. Landouzy ranked highest as an orator. "The Medical Faculty of the University of Lyons," responded to by Professors Arloing and Courmont. "The French Delegation," responded to by Professors Teissier and Leon Bernard. "Our Hosts," proposed by Dr. Beaumevieille, Bois-du-Four, Millau.

The guests, in responding to the different toasts, spoke partly in French and partly in English.

Many of them expressed great surprise and delight respecting

the generous hospitality of the physicians in Toronto and other parts of Canada. They also made several references to His Gracious Majesty the King of England, the great peacemaker, who had done so much to create a good feeling between France and England, that country they loved so much. This visit to Canada had opened their eyes as to the greatness of Greater Britain, and they hoped that in the future there would be more reciprocity between Paris and Toronto than there had been in the past. They hoped Frenchmen would frequently visit Toronto, and they asked Canadians, whether medical students or physicians, to visit them in France, where they would be cordially received.

The party left Toronto on Saturday morning for Niagara Falls. They intended, after visiting the Falls, to go to Buffalo and Albany, thence down the Hudson River to New York, and expected to reach Washington in time for the opening of the Congress, September 22.

The visit of these charming people will long be remembered by the profession and many of the citizens of Toronto.

Although great credit is due to many for the remarkable success of the different entertainments, it is generally considered that the chief credit is due to Dr. W. H. B. Aikins, Dr. James F. W. Ross and Dr. Richard A. Reeve. A. H. W.

CIGARETTES AND GROWING BOYS.

It is generally supposed that the use of tobacco in any form is especially harmful for growing boys. We quite agree with those who believe that boys should not become smokers. What are our reasons for such belief? As stated in our last issue, many of us think that tobacco, even when smoked in moderation, is at least sometimes injurious to the nervous and digestive symptoms.

There appears to be a singular prejudice against cigarettes in this country at the present time, and yet it is probable that the use of cigarettes is the least harmful among all the methods of

indulging in tobacco. It is thought by many that tobacco smoking interferes with the growth of boys. As numerous physicians concur it might be well to consider the grounds for such a supposition. We really do not know that there are any. It happens that this aspect of the subject has been studied in a practical way by Dr. G. L. Meylan, Physical Director of Columbia University, as we are told by *American Medicine*. Many of our readers will perhaps be startled to learn that he found that the students who used tobacco were taller, heavier, and stronger than those who abstained, and that the difference is more than would be accounted for by the slightly greater age of the former.

Of course, we do not consider that this proves that smoking is actually beneficial, but it certainly does prove that many of the statements made by anti-cigarette enthusiasts are incorrect.

The 21st annual meeting of the American Association of Obstetricians and Gynecologists was held at the Hotel Belvidere, Baltimore, Sept. 21-2-3, under the presidency of Dr. Gustave Zinke, Cincinnati.

INFECTION IN TUBERCULOSIS.

Sir William Whitla, Senior Physician of the Royal Victoria Hospital, and Professor of Materia Medica, Queen's College, Belfast, delivered the Cavendish lecture this year before the West London Medico-Chirurgical Society. An excellent summary of the same appeared in the *New York Medical Journal* of August 15th.

Sir William has carried out a large series of experiments in the laboratories of Queen's College, with the object of finding out the most likely channel of infection in pulmonary and other forms of tuberculosis. As a result he has reached the conclusion that the intestinal route plays a more important *rôle* in the production of this disease than has been hitherto recognized.

Professor Koch, on the other hand, believes that the lungs are the usual primary seat of tuberculous infection, and that the

bacilli usually passes into the lungs with the inspired air. He considers that the comparative rapidity of primary intestinal tuberculosis showed that the intestinal origin of the disease was improbable.

In the light of Sir William's experience, however, it would appear that the alimentary canal plays a very important part in the production of pulmonary tuberculosis. Sir William also believes that human and bovine tuberculosis are practically identical, and that the tuberculosis of bovine is transmissible to man, and *vice versa,* and he emphasizes the importance of recognizing that the milk of tuberculous cows is a common source of tuberculosis in children through the channel of the alimentary canal. In confirmation of this, he points to the fact that the bovine type of tuberculosis has been detected in a considerable percentage of cases of human tuberculosis.

TUBERCULOSIS IN NEWFOUNDLAND

The Newfoundland Society for the Prevention of Tuberculosis is carrying on a vigorous and necessary campaign this year in the Island. The death-rate from this disease in Newfoundland is very large. About one in every five of the total population dies of it, and, what is worse, in the last six years, the death-rate, which is stationary or decreasing elsewhere, has increased about fifty per cent. Such a state of affairs calls loudly for a remedy, and the Society for the Prevention of Tuberculosis has rallied the forces of society against the common enemy. As in too many places in Canada, fresh air seems to be dreaded in Newfoundland, and the people spend the long winter closely housed, and with little oxygen. The Government of Newfoundland has given the campaign a splendid start. It has made a grant of money sufficient to bring to St. John's all the teachers of the Island to attend a teachers' Tuberculosis Convention, so that every teacher in the colony will be a leader in the educational compaign. Mr. Alexander M. Wilson, formerly Superin-

tendent of the Chicago Tuberculosis Institute, and now Superintendent of the Chicago Bureau of Charities, visited Newfoundland in August to help on the campaign.

THE CANADIAN MEDICAL ASSOCIATION.

The next meeting of the Canadian Medical Association will be held in Winnipeg early in September, 1909, under the presidency of Dr. Blanchard.

As formerly announced, the annual meeting of the British Association for the Advancement of Science will be held in Winnipeg in the latter part of August, 1909.

We are glad to be able to announce that Dr. Blanchard, of Winnipeg, has, after some hesitation, consented to take the presidency. He has lately been in Great Britain, and on his return home visited Montreal and Toronto, and conferred with certain physicians in these two cities. He brings assurances from the Motherland that many distinguished members of the Science Association will take an active part in the proceedings of the Canadian Medical meeting. Dr. Blanchard and his friends expect large numbers from the West, and are anxious for a goodly number from the East to come to meet them.

THE ONTARIO MEDICAL ASSOCIATION.

The next meeting of the Ontario Medical Association will be held in Toronto, June 1-2-3, 1909, under the presidency of Dr. H. J. Hamilton.

We understand that considerable work has already been done in the way of preparation, especially by the Committee on Papers and Business. The general plan will be similar to that adopted at the last meeting of the Society in Hamilton. A certain por-

tion of the work will be done at the general sessions held each day, while other portions of the work will be done in the various sections. The different heads of these sections have already commenced to arrange their programmes.

THE INTERNATIONAL MEDICAL CONGRESS AT BUDAPEST.

The Sixteenth International Medical Congress will be held at Budapest, Hungary, under the distinguished patronage of the Emperor of Austria (King of Hungary), from the 29th of August to the 4th of September, inclusive, 1909.

A strong Canadian Committee has been formed, composed as follows: Drs. A. McPhedran (Chairman), W. H. B. Aikins (Secretary), A. H. Garratt, E. E. King, J. M. McCallum, G. R. McDonagh, H. J. Hamilton, G. S. Ryerson and A. H. Wright, of Toronto; Drs. H. S. Birkett and F. Shepherd, of Montreal; Dr. J. D. Courtenay, Ottawa; Dr. J. Third, Kingston; Dr. Ingersoll Olmsted, Hamilton; Dr. J. D. Wilson, London; Dr. S. T. Tunstall, Vancouver; Dr. O. M. Jones, Victoria; Dr. H. Halpenny, Winnipeg.

The next Annual Meeting of the British Medical Association will be held in Belfast, August, 1909.

The Fifth Congress of the Pan-American Medical Association was held August 6th to 13th. The next Congress will be held at Lima, Peru, August, 1911.

The Ontario Graduated Nurses' Association has been granted incorporation by the Provincial Government. Its objects are to advance the educational standard of nursing; to maintain the honor of the profession; and to offer legislation in the interest of the public, the physician and the nurse.

INTERPROVINCIAL REGISTRATION

Members of the medical profession throughout the whole Dominion were greatly disappointed that the efforts of Dr. Roddick to secure a system of Dominion Registration proved unsuccessful. It seems now that nothing will be done by federal legislation to bring about the desired result. There remains, however, the possibility of reciprocity in medical registration between the provinces, and for this there seems to be no great difficulty in the way. The first step has already been taken.

Regulations of the Provincial Medical Board of Nova Scotia, 1907-1908, Chapter III., Section 24 (2), reads as follows: "When and as soon as it appears that there has been established in any other province of Canada, or in the Northwest Territories of Canada, an examining board similar to that constituted by the Medical Act of Nova Scotia, or an institution duly recognized by the legislature of any such province or of the said Northwest Territories, as the sole examining body therein for the purpose of granting certificates of qualification for the practice of medicine, and whereof the curriculum is equivalent to that established by the Act, the holder of a certificate of qualification from any such examining body or institution shall, upon due proof, and upon payment of the registration fee, be entitled to registration by the Board, if the same privilege is accorded by such examining board or institution to those holding certificates of qualification from this Board." This is an offer of reciprocal registration on a perfectly fair basis.

A comparison of the regulations and requirements of the medical boards of the various provinces will be of interest in helping to determine whether there is any similarity of standards or any possibility of similarity being attained. This enquiry will have reference to (1) Matriculation, (2) Curriculum, (3) Professional Examinations.

Matriculation.

The regulations of British Columbia, Alberta and Saskatchewan make no reference to a preliminary examination or standard of education. In all other provinces a matriculation is necessary, and the details are very fully given. A certain degree of reciprocity exists in regard to matriculation certificates. Thus, Nova Scotia accepts the examinations of New Brunswick and Prince Edward Island; the examinations of the education departments

of the provinces, and the examinations of any licensing board or council in His Majesty's Dominions, with 50 per cent. in each subject. New Brunswick accepts the examinations of Nova Scotia and Prince Edward Island. Prince Edward Island reciprocates with Nova Scotia and New Brunswick, and offers to do so with other provinces. Manitoba accepts the examinations of the Ontario Council, of the Quebec Council, and of the Ontario Education Department. Ontario and Quebec do not accept other examinations than their own.

The General Medical Council of Great Britain requires that candidates for registration must have passed in all subjects of the preliminary examination at one time. No Canadian Council has such a rule. Ontario and Manitoba require that matriculation be completed before beginning medical studies. Nova Scotia, New Brunswick and Prince Edward Island allow one year for the completion of matriculation under certain conditions. Quebec regulations do not refer to the matter.

As to the subjects of examination:

(1) English,

(2) Mathematics,

(3) History and Geography,

(4) Latin, are much the same in all the regulations.

(5) Experimental Science (Physics and Chemistry) is required in Manitoba, Quebec, New Brunswick and Prince Edward Island. It is not mentioned in the regulations of Nova Scotia.

(6) In Ontario, any two of Greek, French, German, Experimental Science.

In Quebec French is compulsory.

In Nova Scotia any one of Greek, French, German.

In New Brunswick two of Greek, French, German.

In Prince Edward Island any two of Greek, French, German.

There is also a difference in the percentages required to pass.

Ontario requires 40% in each and 50% aggregate.

Quebec requires 50% in each.

New Brunswick requires 40% in each and 60% aggregate.

Nova Scotia requires 50% in each.

Prince Edward Island requires 50% in each.

Manitoba requires 40% in each and 50% aggregate.

Fees vary as follows:

Ontario—Examination, $5. Registration, $20.

Quebec—Examination, not stated. Registration, $20.

New Brunswick—Examination, $5. Registration, not stated.

Nova Scotia—Examination, $10. Registration, $10.

Prince Edward Island—Examination, $10. Registration, not stated.

Manitoba—Examination, $7. Registration, $2.

From all these a common standard might easily be selected that would be acceptable to all concerned. For example:

1. Matriculation to be completed before registration.
2. Examination to be upon the following subjects:
   (1) English.
   (2) Mathematics.
   (3) History and Geography.
   (4) Latin.
   (5) French,
   (6) Experimental Science.
3. Percentage required to be 50% in each subject.
4. Fee to be for examination, $5; for registration, $20.

What alterations in the Ontario regulations would be necessary to bring them to this standard? In place of the student having the option of any two of Greek, French, German, Experimental Science, he would be required to take French and Experimental Science. As a matter of fact, the student usually does this anyway. Then he would require to make 50% in each subject in place of 40% in each and 50% on the whole. There can be no serious objection to raising the standard in this way. In regard to Nova Scotia, the necessary changes would be to add Experimental Science to the subjects, and to make French compulsory in place of any one of Greek, French, German; to make the rule that matriculation must be completed before registration, and to advance the fee. Manitoba would require to add French to the subjects, change the percentage from 40% in each and 50% on the whole to 50% in each, and advance the fee. Uniformity in regard to fees would, however, be unnecessary, and with this factor eliminated the changes necessary should be readily agreed upon. There is no real difficulty in the way of uniform matriculation.

Curriculum.

The differences here are in regard to the time to be spent in medical study. The subjects of study so far as specified are much the same in all.

Ontario requires five years' study, four sessions of eight months each, and a fifth year of clinical work, for which three options are permitted.

Nova Scotia intimates that five years will be required after July 1st, 1908. Details not given.

Quebec requires four terms of nine months each.

New Brunswick requires four terms of six months each.

Prince Edward Island requires four sessions of eight months each.

Saskatchewan requires four years.

Alberta requires four years of six months each.

British Columbia requires four years.

From this it appears that Ontario, Manitoba and Nova Scotia are agreed in regard to curriculum, and that reciprocity might be established between them in this respect without alteration of the present regulations. The other provinces will no doubt soon add the fifth year to their requirements.

Professional Examinations.

The differences here are mainly in the arrangement of the examinations and in the fees. Subjects are much the same, and the usual percentage is 50. A comparison of the papers set will show that there is not much difference in the standard. The examinations and fees are as follows:

Ontario—(1) Primary, at the end of the second year. Fee, $30.
(2) Intermediate, at the end of the fourth year.
(3) Final, at the end of the fifth year.
Fee for (2) and (3) is $50.

Quebec—(1) Primary. Fee, $20.
(2) Final. Fee not stated.

New Brunswick—One examination. Fee, $10.

Nova Scotia—New regulations for five-year course not yet published.

Prince Edward Island—One examination. Fee, $15.

Manitoba—One examination. Fee, $15. License, $75.

Saskatchewan—One examination. Fee, $50. Registration, $52.

Alberta—One examination. Fee, $50. Registration, $52.

British Columbia—One examination. Fee, $100.

It must be evident to anyone who has gone over these comparisons that there is no serious barrier to beginning interprovincial registration. If Nova Scotia and Ontario were to enter upon this relationship it would not take long to complete the arrangement with the others. If there is any real desire for it on the part of the profession generally, it can be brought about, without either provincial or federal legislation, by the medical boards themselves. If it were possible to bring together representatives from the medical boards of the various provinces, a conference would determine whether any essential points of difference exist, or prepare the way for a uniform standard and interprovincial courtesies. The Medical Council of Ontario should lead.—*Queen's Med. Quarterly.*

Personals.

Dr. Crawford Scadding returned to Toronto from Europe September 6th.

Dr. Herbert A. Bruce, after a visit to Europe, returned to Toronto September 26.

Dr. Walter McKeown has been appointed Associate Professor of Surgery in Toronto University.

Dr. Skinner Gordon (Dr. Lelia Skinner) has removed from Carlton Street to 467 Spadina Avenue.

Dr. Graham Chambers has been appointed Associate Professor of Medicine in the University of Toronto.

Dr. William Britton, Isabella Street, is convalescing after a serious illness, which confined him to the house for a month.

Drs. J. Milton Cotton and George McDonagh, who went to New York with Dr. Riordan, returned to Toronto September 27.

Dr. Trebilcock, of 722 Spadina Avenue, Toronto, announces that in future he will confine his attention entirely to ophthalmic practice.

Dr. Jno. T. Fotheringham, of Toronto, returned from London August 31st. He will in future confine his work to office and consultation practice and diseases of children.

Dr. Alfus E. Bennett returned to Toronto July 31st, after spending about 15 months in the hospitals of London, Edinburgh, and Dublin, and is now practising at 36 Melbourne Avenue.

Dr. Clarence L. Starr, of 224 Bloor St. W., returned to Toronto the latter part of August, and since Sept. 1st has confined his practice exclusively to general and orthopedic surgery, and will continue to do so hereafter.

Dr. Charles M. Stewart, who has been doing post-graduate work in London the last six years, has returned to Toronto and opened an office at 142 Carlton Street. He will confine his practice to diseases of the ear, nose, and throat.

The American Public Health Association met in Winnipeg on the 25th, 26th and 27th of August. Among the Canadian practitioners who attended were Drs. P. H. Bryce, Chas. A. Hodgetts, Roberts, John A. Amyot and W. T. Connell.

Prof. G. Sims Woodhead, M.A., M.D., F.R.C.P., Professor of Pathology, Cambridge University, England, will deliver the opening lecture of the twenty-second session of the Faculty of Medicine of the University of Toronto, October 5th.

Dr. Thomas McCrea (Tor., '95), of Johns Hopkins Hospital, Baltimore, was married to Miss Amy Marian Gwyn, in Dundas, Ont., September 16th. Among the ushers were Dr. Thomas B. Futcher, of Baltimore, and Dr. N. Gwyn, of Philadelphia.

Dr. Bruce L. Riordan of Toronto was bitten by a pet dog in his own house, September 15. As the dog had rabies, according to Dr. Amyot's report, Dr. Riordan went to New York for treatment in the Pasteur Institute. At the time of writing reports are favorable.

As stated in our last issue, Drs. Bruce Smith and J. N. E. Brown, of Toronto, left London July 22nd to visit some of the newer hospitals in provincial towns. We learn that they are very much interested in what they saw and heard respecting hospital construction and management.

Dr. Edith Beatty has been appointed Superintendent of Grace Hospital, Toronto, in the place of Miss Patton, resigned. She graduated M.B. from the University of Toronto in 1905, and received her license from the Council in 1906. Before coming to Toronto she practised for a time in Guelph.

The Hon. Dr. Pyne, Minister of Education for Ontario, returned to Toronto after his visit to Great Britain September 12th. While abroad he spent some time looking into the question of technical education in many of the cities of Great Britain. He found, however, that they are in much the same position as in Ontario, and are seeking information as to the best methods of procedure. In a number of cities technical education deals chiefly with the predominant local industries.

Obituary.

FRANCIS C. MEWBURN, M.D.

Dr. Mewburn practised for many years in the Niagara Peninsula, and was well known and highly respected in that district. After retiring from active work he came to Toronto, nearly 20 years ago. He died at his late residence, July 30th, in the 92nd year of his age.

GEORGE M. EDEBOHLS, M.D.

Dr. Edebohls, of New York, died August 8th, aged 54. He was widely known on account of his advocacy of the operation of decapsulation of the kidney as a remedy for Bright's Disease.

CHAS. H. BRERETON, M.D.

Dr. C. H. Brereton, of Bethany, Ont., died at the residence of his son, Dr. T. C. Brereton, Carnduff, Sask., on Sept. 6th. He graduated M.D. from Victoria University in 1868.

CHARLES ERASTUS HICKEY, B.A., M.D.

Dr. Hickey, Medical Superintendent of the Hospital for Insane, Cobourg, died suddenly September 19, aged 70. He graduated, B.A. from Victoria College in 1863, and M.D. from McGill University in 1866. He represented Dundas County in the Dominion Parliament about ten years. He went from Morrisburg to take charge of the Hospital in Cobourg about three years ago. He was highly respected by all classes, and much beloved by his intimate friends.

GEORGE HODGE, M.D.

Dr. Hodge, Professor of Clinical Medicine in the Western Medical College, London, Ontario, died August 26th, of pneumonia, aged 68. He received his medical education in Kingston, and graduated from Queen's University in 1870.

LIEUT.-COL. WM. NATTRESS, B.A., M.D., M.R.C.S., (ENG.)

Dr. Nattress died at his late residence, 42 Carlton Street, Toronto, September 14th, in his 56th year. He graduated from the University of Trinity College M.B. in 1882, and M.D.C.M. in 1884. After graduating he took a post-graduate course in Great Britain and received the qualification of M.R.C.S. On his return to Canada he commenced practice in this city. After devoting himself to general practice for a few years, he took a very active interest in military matters, and for the last few years was principal Medical Officer for Western Ontario.

While taking part in the tercentenary celebration at Quebec he developed pleurisy about August 20th. This unfortunately ran an unfavorable course and terminated in empyema. On September 6th he had a serious embolism, from the effects of which he never rallied. He was well and favorably known among all classes of citizens in Toronto.

SIR JOHN BANKS, M.D.

Sir John Banks, Physician-in-Ordinary to the King in Ireland, died July 23rd, aged 95. He became President of the Royal College of Physicians of Ireland in 1869, and was for a time Regius Professor in the University of Dublin, and had for many years a high reputation as alienist.

Correspondence.

A VALUABLE DISCOVERY—A NEW HYPNOTIC.

Editor of CANADIAN PRACTITIONER:—

Sir,—Please allow me to call attention to the discovery that apomorphine hydrochloride, when administered hypodermically in doses just short of the emetic dose, is an ideal hypnotic. In doses of the 1-30th of a grain, it may be used with safety in all cases in which a hypnotic or antispasmodic is indicated, but is of special value in the treatment of acute alcoholism and delirium tremens. This valuable discovery was made by Dr. C. J. Douglas, of Boston, in 1899, but, strangely enough, the discovery remains almost unknown, and the boon, of course, not taken advantage of as it doubtless will be when this important property of apomorphine becomes fully realized. We know how promptly this drug acts when administered as an emetic in emetic doses of the 1-10th or the 1-8th of a grain. With almost equal promptness is its action when administered as an hypnotic. The alcoholic, however wild or noisy, will, as a rule, be peacefully sleeping in ten or twelve minutes after the 1-20th or the 1-30th of a grain is administered subcutaneously. This sleep may last several hours, when the patient awakens refreshed and sober. Douglas employed the remedy, with these doses, in over 200 cases, mostly alcoholics, including cases of delirium tremens, and with gratifying results. Drs. Coleman and Polk, of Bellevue Hospital, New York, used it in over 300 cases of alcoholism, also with gratifying results. Dr. Rosenwasser, inebriatist to Newark Dispensary, Newark, N.J., has also used apomorphine in the same manner and for the same purpose, and with equally satisfactory results. The dose administered was from 1-30th to 1-20th of a grain. With these doses, the hypnotic effect is secured in 67 per cent. of the cases. Even the 1-40th of a grain, in my experience, is effective with some patients.

There are vagaries in the conduct of apomorphine that should be noted, viz., it is inert when administered in a solution of boracic acid; it is almost inert as a hypnotic or centric emetic when administered by the mouth. It should also be noted that the crystaline form only should be used, and also that, in cases in which the pulse is feeble, strychnine should be given in association with the apomorphine.

This important discovery will surely mark the commencement of a new era in the management of cases of acute alcoholism and delirium tremens. In many hospitals, at present, these troublesome cases are far from being welcome guests, but when it becomes generally known that we have at command an hypnotic, safe and prompt in its action, and peculiarly adapted to the management of these perplexing cases, this reluctance to their reception should be entirely removed. It is doubtless pretty generally known to the members of the medical profession of this Province that a bill was prepared several years ago for the Ontario Government for the economic treatment of indigent inebriates. This bill was drafted by a joint committee, representing the Ontario Medical Association and the Prisoners' Aid Association, respectively. From various causes, this bill has never been presented to the Ontario Legislature, but a special effort will be made to have it introduced at the next session. In this bill, as will be remembered, it is proposed, with a view to economy, to utilize the wards of the general hospitals of the Province for the reception and treatment of indigent inebriates of the more hopeful class. This discovery of the hypnotic property of apomorphine, and the facility with which it brings alcoholic patients under control will, doubtless, help very materially in clearing the way for the introduction of the bill, and when the bill is adopted and its provisions faithfully carried out it should go a long way in cutting off the supply of recruits for the jails of the Province, as well as for the combined reformatory and farm colony about to be established by the Ontario Government.

In this connection I would add that in the proposed bill provision is also made for combining the Massachusetts probation system of prolonged supervision with medical treatment, and this medical treatment may be carried out, according to the nature of the case, either in hospital or in the form of dispensary or home treatment. This system of combining the probation system with medical treatment has been in operation in Toronto, by the Ontario Society for the Reformation of Inebriates, for over two years, on a small scale, with encouraging results.

Yours truly,

A. M. ROSEBRUGH,

Secretary Ontario Society for the Reformation of Inebriates.

Toronto, August 22, 1908.

Book Reviews.

A Treatise on the Principles and Practice of Gynecology. By E. C. Dudley, A.M., M.D., Professor of Gynecology in the Northwestern University Medical School, Chicago. Fifth edition, thoroughly revised. Octavo, 806 pages, with 431 illustrations, of which 75 are in colors, and 20 full-page colored plates. Cloth, $5.00 net; leather, $6.00 net; half-morocco, $6.50. Philadelphia and New York: Lea & Febiger. 1908.

We have much pleasure in stating our belief that Dudley's Gynecology is most admirable for general practitioners, specialists and teachers. Dr. Dudley was first to see the advantage of presenting gynecology along natural lines of cleavage, by causes, rather than regions. With the cause or nature of a disease in mind, the reader can readily follow it to any region it may invade, and understand and treat it, but the labyrinth cannot be so easily traversed the other way. Some years ago the author gave this book further distinction by making all its abundant illustrations original, each drawn for its special place and purpose, and therefore exactly fit. He also saw his reader's advantage in showing him the steps of operations, a clinic on paper, and better than a clinic, because the details could be studied at leisure. Now Dr. Dudley again responds to popularity by bringing out a new edition (the fifth in ten years), thoroughly revised to date, with everything obsolete in text or picture eliminated, and with still more original drawings added. It is the strongest issue yet of a very strong book.

The Ready-Reference Handbook of Diseases of the Skin. By George Thomas Jackson, M.D., Chief of Clinic and Instructor in Dermatology, College of Physicians and Surgeons, New York. Sixth edition. 12mo., 737 pages, with 99 engravings and 4 plates, in colors, and monochrome. Cloth, $3.00, net. Philadelphia and New York: Lea & Febiger. 1908.

Since the previous edition of this work its author has been elected to the full Chair of Dermatology in the College of Physicians and Surgeons, of New York, a tribute both to the man and to his book. An examination of his pages affords some insight into the reasons for this appreciation. The most obvious charac-

teristic is directness. The author clears the ground in his opening sections on Anatomy, Physiology, General Diagnosis and Therapeusis, and disposes of the moot subject of classification and nomenclature in the briefest and clearest way by means of a table, displaying the various diseases arranged in the most rational system, with the prominent primary lesion mentioned. The reader is now qualified to take up skin diseases in any order, and the most natural and practical is according to the alphabet. Herein lies the "Ready Reference" feature embodied in the title. Each disease is considered in full, beginning with synonyms and proceeding through the symptoms to the etiology, pathology and diagnosis, and to especially full sections on treatment covering all varieties and complications. The book is rich in formulas of proved value in this very trying class of cases. Answering the needs of students, as well as physicians, this work has merited the demand for six editions in sixteen years. It is well established in favor and repays it by frequent revisions, enabling its readers always to keep posted to date.

Medical Gynaecology. By Howard A. Kelly, A.B., M.D., LL.D., F.R.C.S. (Hon. Edin.), Professor of Gynaecological Surgery in the Johns Hopkins University, and Gynaecologist to the Johns Hopkins Hospital, etc. Pp. 662; 163 illustrations, for the most part by Max Broedel and A. Horn. New York and London: D. Appleton & Company. 1908.

This recent production of Dr. Kelly's should do much to satisfy a need that is pressing. It is especially adapted for the use of the general practitioner, into whose hands practically all gynaecological patients first come. Dealing, as it does, with the various diseased conditions and their management up to the point where the gynaecological surgeon, as such, becomes essential, it is not burdensome. For the student at college it is excellent, though insufficient as a work on gynaecology, because it does not treat of the surgeon's work in respect to gynaecological conditions—the students of to-day being expected by slave-driving medical educationists to attain a specialist's knowledge in all and sundry departments of medicine and surgery before graduation. A careful and complete perusal of its pages from cover to cover convinces one of the high capabilities of the writer, both as a surgeon and as an instructor in the science of gynaecology. The information contained in the book is vast, valuable and of a practical kind. Reading it has been a profit-

able pleasure. It is true that a certain amount of plodding was necessary to get through with "Affections of the Sacro-Iliac Joint" and the description of the syphilides, but, no doubt, their importance deserves the space given to them.

The illustrations are of high order, though, perhaps, somewhat more profuse than is necessary to clear understanding. Nothing would be lost by the omission of such an one as appears on page 48, "Toilet Accommodations for Twenty-two Families," or of that on page 462, in which the careworn, despondent attitude is anything but soul-inspiring.

In all places and at all times references to "gynaecological tinkering" abounds. Dr. Kelly's valuable book should hasten the demise of such detrimental practice. F. W. M.

The Development of Ophthalmology in America. 1800 to 1870. A contribution to Ophthalmologic History and Biography. An address delivered in abstract before the Section of Ophthalmology of the American Medical Association, June 4th, 1907. Revised and enlarged. Illustrated by selected portraits and cuts. By Avin A. Hubbell, M.D., Ph.D., Professor of Clinical Ophthalmology in the University of Buffalo, etc. Buffalo, New York: W. T. Keener & Company, 90 Wabash Avenue. 1908.

Originally an address, this is now a book of 197 pages. Classing Canadians as Americans, the author shows what America has done to advance the science of ophthalmology in the period mentioned. The work covers the ground under the headings, "Factors of Development—Institutions and Surgeons," "Biographical Sketches," "American Ophthalmologic Literature to 1850," "Special American Contributions," "Transition Period . . . to the Ophthalmology of the Specialist," "The Pioneer Specialists," "An Era of Rapid Change after 1850," "Other Factors of Advancement," "The New American Ophthalmology."

The first institution in America for the treatment of diseases of the eye was opened in New London, Conn., in 1817, by Dr. Elisha North. The second was opened in New York in 1820 by Dr. Edward Delafield and Dr. Rodgers. The first Canadian institution for the treatment of the eye and ear was opened in Montreal, in 1846, by Mr. Henry Howard. Drs. Rosebrough and Reeve, of our own city, are spoken of as pioneers in the science of ophthalmology.

The plan of the work necessitates a certain amount of repetition, but it is clearly written and of absorbing interest to all connected with ophthalmology. Its value is enhanced by a number of excellent portraits of ophthalmologists and others, and the book must prove a veritable gold mine to future workers in this field. It is also a work which medical men generally will find of much interest.

The Principles of Pathology. By J. George Adami, M.A., M.D., LL.D., F.R.S., Professor of Pathology in McGill University, and Pathologist to the Royal Victoria Hospital, Montreal; late fellow of Jesus College, Cambridge, England. Vol. I., General Pathology, with 322 engravings and 16 plates. Philadelphia and New York: Lea & Febiger. 1908.

This is a work for which we have long waited. For some years those who were interested in pathology have known that Prof. Adami was laboring upon a book which was to make a name for himself and for the university which he represents—a prophecy which is now amply fulfilled. In a book of 926 pages Prof. Adami has covered the whole ground of general pathology, so that his work ranks with that of Ziegler, in spite of the fact that many important parts were destroyed by the fire in McGill University and had to be re-written.

Everywhere the book is readable; the sentences are clear and concise, and the writer holds the attention, and thus avoids the great drawback of nearly all works translated from a foreign language.

We might mention in passing that Prof. Adami has made full use of his classification of new growths, notice of which has been previously taken in this journal. We eagerly await Vol. II.

Messrs. Lea & Febiger, of Philadelphia, announce the new edition of Gray's Anatomy. The revision of the new work has occupied the last two years.

Miscellaneous.

Edinburgh University and Medical Education.

"Nothing," as an American politician once declared, "Nothing is ever settled until it is settled right," and much comfort is to be derived from this common-sense consideration, both by the victors and the vanquished in many a well-fought field. To the victors, who are doubtless in many cases, at least, as well-intentioned as the vanquished, it is a comfort to think that if they have unhappily been on the wrong side, the battle will be fought over again, and the right will prevail, perhaps by the help of themselves grown wiser, and now on the right side,

"In thine, win another's day."

To the vanquished, if they are on the right side, it is an adequate, and more than adequate, consolation for defeat that the matter is not yet settled, and will in the end be "settled right." We can imagine these considerations to occupy at present the mind of many in Edinburgh and elsewhere, who, since the year 1860, have looked forward to a just settlement of a difficult question—the Medical Education of Women in Edinburgh University. No one now defends the action of Edinburgh University. Indeed, then, as now, everyone wondered at it. The stream of time, which turns so strangely, has reached a place where the old decision must be met again. A public meeting of the citizens of Edinburgh, distinguished alike for the influential character of the audience, the moderation of the arguments and statements made, and the quiet tone of conviction which pervaded the speeches, was held in Freemasons' Hall on July 8th, 1908.

For some years, the Scottish Association for the Medical Education of Women has provided classes for women in medicine at Minto House, so that they might be there prepared to pass the examinations and receive the degrees in medicine of Edinburgh University. It was only a temporary plan. It has never been very satisfactory, as is illustrated by the fact that last session, of the twenty-five women who presented themselves for the second professional examination, twenty-four failed. When we remember what happens in similar seats of learning in other countries and the average character of Scottish brains, it must be evident that there is only one explanation of this phenomenon—these twenty-five students were

under some serious disadvantage and that disadvantage, it seems, was the inadequate equipment and apparatus of Minto House, especially in the departments of anatomy and physiology.

The present crisis may be expressed in one word. Without the knowledge of those interested, Minto House has been sold. The present arrangement, unsatisfactory as it is, is ended. There is now no means by which a medical student who is a women may study medicine at Edinburgh. And what is the function of a university? The citizens' meeting unanimously passed a resolution expressing regret at the failure of the University Court to provide medical education for women, and asked that body to make "such arrangements as will afford an equality of opportunities for training to all to whom it offers its degrees." The *Edinburgh Scotsman* says:

"This protest and appeal is well-timed and well-put. The situation into which the medical education of women has been allowed to drift in Edinburgh is unjust to the women students, and not creditable to the University authorities. As it concerns the efficiency and the reputation of the University, it must concern also the city and the community in which the University is placed. The claim that is made for adequate medical education and for equality of opportunities for the women who come up for degrees can be put on bare grounds of justice. The University has undertaken responsibilities which it is apparently not prepared to discharge. It has, indeed, through the action or inaction of the Court, fallen into a position that is not inconsistent only, but unreasonable and untenable. If not now, at some near date, it will be forced to choose between giving up any pretence of taking oversight and direction of the medical education of women, and complying with the claims moderately put forward at last night's meeting. Either of these courses may be justifiable. But if the first be adopted, and Edinburgh University ceases to grant degrees while refusing to provide the necessary training to female students in medicine, account must be laid with the loss of prestige and repute which Edinburgh would thereby sustain as a school of medicine. Even financially, this alternative has aspects which cannot be regarded lightly. It has been stated that the fees from the women students of medicine amount to some £2,800 a year. The claims of the University in appealing for funds to the Government and to the Carnegie Trust would be gravely weakened if it decided to have nothing

The Canadian Practitioner and Review.

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Original Communications.

KILLIAN'S SUBMUCOUS RESECTION OF THE NASAL SEPTUM.*

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The comparatively new submucous operation, or window resection of the nasal septum, has been so thoroughly discussed for the last three or four years in rhinological circles that very little new remains to be said about it.

Much as we owe to Killian of Frieburg, and Freer of Chicago, for their many ingenious devices to overcome difficulties in the operation, and also for their cleverly designed instrumentarium. To-day we may consider the technique of the operation has nearly reached perfection. In the past, the different varieties of operations for correcting septal deformities were nearly as numerous as the number of operators; but now there is practically one operation, and that the one under discussion. As it is scientific and fairly easy to perform, it will doubtless be the operation for many years to come.

My remarks will be founded on the experience I have derived from operating on fifty-three cases. Of these, thirty-eight were adult males, and twelve adult females; the remaining three in children, their ages being seven, nine, and ten years.

The details of the operation I shall not describe, but will discuss a few points in the technique of the operation, and also indicate the usefulness of the operation for conditions other than nasal obstruction.

* Read before the Section on Eye, Ear, Nose, and Throat of the Canadian Medical Association at Ottawa, June, 1908.

Selection of Cases: The ideal case is an adult male with a marked bow-shaped deflection of the cartilaginous septum.

The reason why this case is so suitable is because the field of operation is well in view, and also because the patient is most likely to stand the operation well, as only a local anæsthetic is used. In patients under puberty one should be very careful not to do an extensive operation on the septum. Better to temporize, and later on, when the child has reached adult life, to do a proper resection operation. I know of a case—a young girl now aged fourteen, who, five years ago, had a very moderate amount of cartilage removed from her septum, and to-day she has quite a marked flattening of the tip of her nose. The present deformity will, no doubt, increase as she grows older. The reason for such deformity is probably, not that the fibrous tissue contracts after healing takes place, but that the fibrous tissue does not develop equally with the growing nose, and so the tip is pulled down, producing a bullet-shaped nose.

Choice of an Anaesthetic.—As the operation is not a painful one, a local anæsthetic is usually all that is required.

For adults, I have been in the habit of using a solution of equal parts of 20 per cent. cocaine hydrochloride and adrenalin chloride (1-1000). Pledgets of absorbent cotton are then soaked in this solution, and then each nostril is carefully packed with the pledgets. The patient is then allowed to lie down for twenty-five minutes, with directions not to swallow any cocaine that may trickle back into the throat. The pledgets of cotton are then removed, and Codrenine (made by Parke, Davis & Co.), thirty minims, is injected under the mucous membrane on each side of the septum. This amount should not all be injected in one place, but in four or five places, and especially beneath an area of mucous membrane opposite the anterior end of the middle turbinate. In the case of children and nervous females, a combination of local and general anæsthesia is required. The reason for giving a local as well as a general anæsthetic, is to lessen the amount of hæmorrhage during the operation, and also to lessen the amount of general anæsthetic required. The general anæsthetic is given after the absorbent cotton is removed from the nose.

Chloroform is the best anæsthetic, and should be given by a Junker's inhaler. Just enough chloroform is given to keep the patient unconscious of her surroundings.

Position of the Patient.—The patient lies with his back on an operating table, the head of which can be raised or lowered

to suit the operator. The patient is at rest, and has none of those fainting attacks that so frequently happen when the patient is in the sitting posture. Neither does the patient suffer the discomfort of holding the head in a fixed rigid position.

One disadvantage of the reclining posture is, that some little blood may pass into the throat. This may be arranged for by allowing the patient to have a towel into which he may expectorate when it is necessary. By this means the patient does not need to lift his head off the table, and, therefore, does not disarrange any of the sterilized towels and instruments that may be on his chest.

Another objection that some operators might advance is, that it is more difficult to get a good view of the floor of the nose, and therefore more difficult to remove the incisive crest, which, by the way, should usually be removed in order to get a good result. However, this objection is soon overcome by a little practice in operating with the patient in the reclining position.

Incision in the Mucous Membrane.—Always operate on the convex side of the septum. A single vertical incision is usually all that is required in a simple case. This incision should be one-quarter inch in front of the point you intend to go through the cartilage. If there is a ridge or spur in addition to the deflected septum, a horizontal incision is required as well; but never make the horizontal incision unless it is really necessary, for it increases the risk of injuring the mucous membrane during the remaining part of the operation, and also lessens the chances of getting good apposition when the operation is finished.

The reason you operate on the convex side is because the mucous membrane on the convex side is more difficult to free. Knowing this, you attack it from the most favorable position. The mucous membrane on the convex side is usually very thin, and has a great tendency to have a patch of rhinitis sicca on the most prominent part of the deflection, especially if the deviation is far forward.

First Cut Through the Cartilage.—There are two methods that I have used with about equal success. Killian's method is to "scratch" a hole in the cartilage with a sharp edged elevator. This is the method that I have usually adopted, but instead of using an elevator I use the point of a small scalpel.

A small slit is soon made in the cartilage by a few gentle strokes of the knife. You realize that the cartilage is gone through by the lessened resistance; then with one of Killian's blunt elevators, gently begin to strip off the mucous membrane on the concave side. Always try and keep under the perichon-

drium, and the task of freeing the mucous membrane is quite easy.

The vertical incision should be made at least one quarter of an inch in front of the point where you intend to go through the cartilage; for if by chance you go through the mucous membrane on the concave side, there will be no permanent perforation in the septum when the two mucous membranes come together.

The other method is to make a small vertical incision far forward on the concave side, and through this incision free the mucous membrane on the concave side around the area where you intend to come through the cartilage from the convex side. One horsehair stitch closes the incision, and within forty-eight hours the mucous membrane on the concave side is perfectly intact.

Frequently there is a dislocation of the triangular cartilage of the septum presenting in one nostril, and a deflection of the septum on the other side further back; in such a case, operate on each condition separately, and through different nostrils.

Resection of the Cartilaginous and Bony Septum.—For freeing the cartilage above and below I prefer Killian's forked plough.

Ballenger's swivel knife has many advocates, but I usually have difficulty with it when I try to change its direction.

The posterior attachment is the most difficult to free. Many instruments have been designed for cutting it, but the method I like best, is to seize the deflected part of the septum with a pair of polypus forceps, after the anterior, superior, and inferior borders have been cut, and by two or three lateral movements, the deflected part of the septum comes out intact.

Frequently, one may take out in the articulated condition the deflected area of the septum, which consists of parts of triangular cartilage of the septum, perpendicular plate of the ethmoid, and anterior extremity of the vomer.

Some operators claim that fractures of the septum may be produced by this method, but I have had no indications that such occurred in my cases.

The incisive crest may readily be removed by Killian's bayonet-shaped gouge and a mallet; then if there are any remaining projections of cartilage or bone which require to be removed, this can easily be done with a Jansen-Middleton forcep.

There are some conditions where the submucous operation may be done with good results, other than to relieve nasal obstruction. A few of these conditions I shall briefly mention.

Atrophic Rhinitis.—Hopman thinks that there is a definite

type of skull in Atrophic Rhinitis. Meisser found that in cases of Ozena, 97½ per cent. of them had heads of the brachycephalic type. At any rate, it is a well known fact, that a congenitally wide nose is one of the common predisposing causes of Ozena. From these facts, Parker reasoned that unilateral atrophic rhinitis with deflected septum should be cured by correcting the septal deformity. He operated on a series of such cases by the submucous method, and found that the ozena in these cases was cured, or if not cured, greatly relieved. I have had the opportunity of operating on three such cases. Two were completely cured at the end of three months, and the third was improving, although not cured, at the end of four months.

Rhinitis Sicca with Epistaxis.—A condition of rhinitis sicca frequently develops on the prominence of a slightly deflected septum, especially if the deflection is far forward.

In this region, the inspiratory air current first impinges on this mucous membrane, and the ciliated mucous membrane becomes gradually changed to the squamous type. Then dust and foreign bodies begin to lodge on this area, and soon crusts form. Every time a crust is removed the nose bleeds, and shortly, if the case is neglected, a perforation in the septum results.

Recently I have operated on two cases of severe epistaxis. In both cases, there was a slightly deflected septum, and on the most prominent part was a patch of rhinitis sicca. It was from this area that the bleeding occurred. In each case, a limited submucous resection was done, and the epistaxis has been completely cured. No doubt the epistaxis might have been temporarily cured by the use of the galvanocautery, but the cause of the condition would still remain.

Deafness.—Occasionally unilateral deafness is noted in patients with a markedly deflected septum. Possibly, the aurist wishes to pass an Eustachian catheter, but finds it impossible to do so on account of the nasal deformity. By correcting the septal deformity, it gives an opportunity for catheterization, but even if the deflected septum is corrected and no catheter used, a marked improvement in hearing follows.

The air currents are greatly interfered with in the obstructed nostril, and so the mucous membrane in the region of the Eustachian tube on this side is wet and sodden. Partial or complete stenosis of the tube follows, and deafness is the result. By correcting the deformity of the septum, the air currents are able to take their natural course, the diseased mucous membrane in the nose-pharynx becomes healthy, and in the course of a few months the hearing is considerably improved.

Narrow Naries.—The septum may not be deflected, but is irregular and very much thickened. The cartilage of the septum may be nearly one quarter of an inch in thickness, and when this is covered by perichondrium and mucous membrane, the total thickness of the septum may reach nearly two-fifths of an inch. This in a narrow nose is considerable.

When the patient has a slight cold in the head, the turbinates become swollen, and soon are in contact with the septum. A submucous resection of the septum will increase the width of each nostril by one-eighth of an inch, and this is considerable in such a narrow space. Of course, it may be said, why not cauterize the turbinates, or even remove the anterior end of the inferior turbinate? The importance of saving the normal mucous membrane in the nose is so great, that we should sacrifice time and labor to accomplish it.

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THE USE OF ANTI-DIPHTHERITIC SERUM AS A PROPHYLACTIC AGENT AT THE HOSPITAL FOR SICK CHILDREN.*

By Wm. Goldie, M.D., Toronto.
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Diphtheria has, by reason of the use of the anti-diphtheritic serum, been removed from the position of one of the most dreaded of diseases, no longer giving rise to the extreme horrer and panic in the family or in the institution. Yet its incidence has not been reduced at all, so that the quarantine measures must remain as strict as ever, and the inconvenience and the loss occasioned by these measures be felt all the more acutely, now that the dread has been removed. Nowhere does the quarantine interfere with the normal routine so much or with such disastrous results as in children's hospitals, and the object of this paper is to bring up to date the results obtained in the Hospital for Sick Children by the use of the anti-diphtheritic serum as a prophylactic, in the endeavor to overcome the incidence of the disease and the paralyzing effect of the quarantine.

To understand more fully the conditions existing in children's hospitals and the limits of the use of the serum as a prophylactic in other institutions, it will be well to briefly recall the method of transference and the main points in regard to the incidence of the bac. diphtheria.

Bac. diphtheria, like all similar organisms, must be conveyed from person to person under the laws governing the bodily movement of any solid particles of matter; to remove it from one site to another there must be the application of force. The common site in man of the growth and development of this bacillus being in the upper air passages, the force applied must be either that of the outflowing air current or the intervention of some external agent.

The ordinary expiration is not forcible enough to expel any particles, but forcible talking, laughing, crying, coughing or spitting detach many bacilli-laden droplets and particles and distribute these to all parts of a room; hence it will depend upon the number of bacilli expelled and the secondary forces which keep them circulating in the air whether they will gain access, like any other solid particles, to the air passages of a second

* Read before Ontario Medical Association.

individual, and, having found lodgment in this apparently favorable site, it will depend upon their ocability and the suitable character of the surroundings whether they will grow, leaving out of consideration altogether the conditions under which they may produce toxic symptoms in the individual.

That transference does take place in this way has time and again been proved by the examination of the droplets expelled and by the exposure of susceptible animals to the expelled air currents; and that it must be the main method of transference is demonstrated by the unfailing spread of the infection in the well-lighted wards of the hospitals, where the dust has been vigorously kept down by moist floors and wet dusting.

To this direct air contamination add the indirect air contamination by the dried excreta transformed into dust (both of which may be going on for great lengths of time because of the long life of the bacilli in the air passages), then it must follow that the percentage of people infected with bac. diphtheria must increase as association increases, from a low percentage of carriers in the general population to a much higher among institution inhabitants.

If the carrier be a case of clinical diphtheria, whose mucous membranes are irritated with all the consequent acts of coughing, etc., the bacilli expelled will be greater in number, and the contacts of such a carrier will show a much higher percentage of carriers infected, depending, as above, on the association.

These points are fully borne out by the experience of all, and I will only add examples of the prevalence of carriers as given by various investigators.

General population	.29% to .43%
School children (not in time of epidemic)	1. % to 2.5 %
Mill operators	1.5%
Mass. Gen. Hospital	2.6%
Toronto Gen. Hospital	4.9%
(After recurrence of several cases.)	
School children (during an epidemic)	10.4 % to 11. %
Hospital for Sick Children	11.3 % to 13. %
*General contacts	11.7 % to 11.9 %
*School children contacts	34.7%
*Family contacts	50. % to 60. %

* Contacts are those who have come in contact with Clinical cases of Diphtheria for several hours or more.

NOTE.—The virulent forms found in the above range from 17% in case of the general population, to 3.% in the case of general contacts.

From these examples, the conclusion can be drawn that the incidence of carriers increases in almost direct relation to the association and the age of the individual, and the introduction of fresh strains of the diphtheria bacillus.

In the Hospital for Sick Children all these favorable circumstances are frequently combined, for here there is the close association of 150 or more children of the susceptible age, with an average stay of about 37 days, and hence the likelihood of the frequent introduction of fresh strains of the diphtheria bacillus, while the persistent carriers are a constant source of danger to the newcomers. The fact that we are here dealing with ailing children seems to be of no importance other than that the prevalence of crying and coughing aids in the distribution of the infection.

Providing that the prophylactic use of the serum has no effect in clearing up carriers, and I have known carriers to remain unclean for five months, in spite of the free use of the serum, then we would expect the percentage of carriers found in the hospital to take the place in the above list where it appears, that is, as great as that of general contacts and greater than that of school children during an epidemic.

In the latter case the individuals are at the same susceptible age, but the association is not as great, and the individual population remains constant, hence the introduction of fresh strains of the bacillus is not as frequent, nor the transference as common; but once introduce virulent forms with the coryza symptoms, the percentage of carriers rises rapidly, even above that of a hospital where all are being immunized. In the case of a school the children can be separated in their homes, and only the carriers and their families given antitoxic serum, but in the hospital such separation is impossible, and owing to the quarantine many urgent cases would have to be refused admittance.

Previous to the use of the antitoxic serum as a prophylactic, clinical diphtheria was enidemic among the children alone; 32 to 48 cases would occur in the course of the year among a yearly population of about 780.

Such a high rate of incidence of clinical cases throughout the year, with the crippling of the hospital work, led to the use of the serum as a prophylactic, and at first it was used in 500 unit doses every three weeks, but this was soon changed to 1,000 units every three weeks. Immediately the clinical cases fell to an average of 7 or 8 cases a year, in all of which the development of clinical signs and symptoms were explainable as occurring near the end of the three weeks' period, or within twenty hours

of the injection of the serum, or, where through neglect or intention the serum had not been administered. So remarkable a fall in the number of the cases was only equalled by the mildness of the attacks in those cases which had received any serum recently, and this was so marked that the members of the house staff came to look upon diphtheria as a trifling disease, until brought to an appreciation of the necessity for precautionary measures by the occasional severe case that would come to the outdoor clinic.

That the 7 or 8 cases which did occur were preventible was apparent, and as the apparent cause was the failure of the dosage to immunize for three weeks, the interval was shortened to two weeks and the dosage to 500 or 1,000 units, according to the size of the child.

During the four years since this change was instituted there have only been 19 cases of clinical diphtheria among the children, an average of about five a year. Of these 19 cases, all but five are explainable by the interval still being too long in special cases or that the serum was withheld for some reason. Examples of these were the following cases:

Child E. B., aged 8 years; developed a severe bronchitis and was considered so ill that the routine injection was not given; death on fourth day; post-mortem and bacteriological examination showed the bronchitis to be due to bac. diphtheria without membrane.

Child C. D., aged 7; no antitoxin administered for three weeks; faucial diphtheria developed; 10,000 units; recovery.

Child E. S., aged 8; routine injection—500 units—17 hours after reddening of throat with slight membrane; 10,000 units; recovery.

The five cases unexplainable by the length of the interval or the withholding of the routine dosage were laryngeal cases, developing in the active stage of measles. Four of these died within twelve hours of the first ascertainable symptom, in spite of large single and repeated injections of serum. The fifth case, seen within one and a half hours of the onset of symptoms, was given 18,000 units extravenously and 32,000 subcutaneously, recovering, only to die of pneumonia five days later.

The failure to recognize this severe and overwhelming toxaemia in the earliest stages as due to the diphtheria bacillus was owing to the fact that no membrane was formed, so that if it had not been for the findings microscopic and bacteriological they would have been placed in the class of laryngitis with inspiratory pnuemonia. These cases had received the routine injection of

serum, and it would seem that measles does away with all resistance to the diphtheria bacillus, rendering useless the small amount given in the ordinary prophylaxis, and this is in agreement with the findings of many other observers.

Since the occurrence of these cases it has become the routine to give 2,000 units to every case of measles when first seen, and if the anginose symptoms keep up to repeat the injection on the fourth day. Following this change no diphtheritic poisoning has occurred, though many of the measles patients showed free-growing diphtheria bacilli in cultures from the throat.

The only exception to the uniform results recorded was this year (1907-1908), when one of the services, consisting of 35 to 40 beds, discontinued the use of the serum for three and a half months, with a consequent development of 29 cases of nasal carriers. Of these 29 carriers, 19 belonged to that service and 10 to other services whose patients were associated in the same wards. Among the 29 carriers, 13 showed clinical signs of prolonged temperature, increasing pallor, weakness and pulse rate; 10 belonged to the unimmunized service, and 3 to the immunized services.

As soon as the routine administration was resumed the clinical cases ceased to arise, though many of individual cases and carriers remained as carriers for many weeks.

In contrast to the marked reduction in clinical cases due to the general administration of the serum, the number of carriers remained practically the same, never for any one set of swabs going below 11.3%, and I have never seen any carrier clear up because of the administration of serum in large or repeated doses, locally or subcutaneously. The clearance being rather a matter of time, with more relation to the local condition of the nose and throat than to the state of general health. I have not seen that any of the applications in common use had any effect in getting rid of the bacteria; rather is the opposite effect suggested by our results.

Up until this winter there had never appeared any serious or alarming symptoms among the 4,084 children to whom the serum had been administered from once to thirty times during their stay in the hospital. There have occurred since then two cases in whom death seemed imminent shortly after the administration of serum: one was a case who had had repeated injections, and in the other the symptoms followed immediately upon the initial injection of serum into the thigh: a dusky hue was noticed widely around the site of injection, rapidly becoming swollen and red. Within ten minutes the patient became wildly excited,

with purposeless struggling, the pulse becoming more rapid, then irregular; erythematous patches appeared on the legs, turning to a scarlatiniform rash as it spread on the trunk; the face, chest and hands became evenly suffused, the color at first red, then more and more bluish as the pulse became more irregular and weak, and finally imperceptible in the radials, the evidence of urticarial swelling of the bronchial mucous membranes became more marked and the patient sank into a stupor. Atropine and whiskey were freely administered, and within five minutes the pulse was again to be felt in the radials. In twenty-four hours the patient's condition was good, except for the great swelling of the leg, which was covered with erythematous blotches.

The most frequent of the minor ill-effects following the administration of the antitoxic serum is the rash urticarial or erythematous, which appears in one individual out of eighteen. The interval between the injection and the occurrence of the rash may vary from a few minutes up to fourteen days, the greater number of rashes appearing after the fifth day if one leaves out of account the local disturbances at the site of injection. In certain individuals the rash may remain for three days, but the usual duration is 12 to 24 hours. There are cases on whom the rash appears day after day for as long as eight days.

Those patients who have had the rash appear once are very likely to have it occur after some subsequent injection, and a few will have it appear after every injection.

In these susceptible individuals calcium lactate does not seem to have any effect in preventing the appearance of a rash.

Certain serums produce a greater number of rashes, always in much greater proportion among those who have already had rashes. And I have not been able to satisfy myself that the rash production in the susceptible individuals was lessened by the use of the antitoxic serums prepared by precipitation.

Of the other ill-effects, I have not been able to satisfy myself that there is a temperature directly developed by the serum or at the time of the appearance of the rash, where there has been a temperature, it has usually been found that the injection had been made into a dense tissue or made too rapidly, with much subsequent pain and discomfort.

Arthralgia has been uncommon, except after large curative doses, but when it occurs it persists for many days.

Abscess is uncommon, usually occurring when the serum has been injected too rapidly and forcibly in case of a patient suffer-

ing from a septic process, with well-marked signs of exhaustion and general infection. Such a patient may develop an abscess with each injection, no matter how carefully it may be given, and the bacterium found in the pus is that producing the septic process.

The site of the injection should be into the loose subcutaneous tissue, by preference into that above and behind the great trochanter or into that over the lower quadrants of the anterior abdominal wall. Slight local reaction, in the form of swelling and redness, may occur in any case, but when the firmer tissues are the site of the injection the more severe is the local reaction, swelling and pain great, with a sense of general discomfort, and maybe a rise in temperature.

In contrast with the falling incidence of diphtheria among the children, there has been no change in the percentage among the nursing and house staffs, to whom no immunizing injections have ever been given. Every year there would arise five or six cases among a staff whose average number —, of whom — would be replaced each year. It is in connection with the treatment of these cases that there is a great saving to the patient and to the hospital by the use of what may seem very large initial injections of the serum.

All cases occurring among the staffs were seen within 48 hours, and most of them within 24 hours of the onset of symptoms. At first it was the practice to administer 3,000 to 5,000 units at intervals of 8 hours, until membrane showed signs of improvement. This entailed a stay in bed of 7 to 12 days and a further period of several weeks on holidays to regain strength. The loss to and the crippling of the hospital was almost as great as when cases developed in the wards, and the injury to the patient was more than one would have expected among cases secured early in the first day. All of the nursing and house staffs were appealed to and instructed to report at once any evidence of illness or sore throat, and subsequent cases were seen earlier. These were given 15,000 to 22,000 units in one injection, and in no case were any diphtheria poisoning symptoms existent by the end of 24 hours from the time of injection, nor did the heart at any time show any sign of injury, even when on the fourth or fifth day from the onset the nurses went on duty in the infectious disease wards. The economic value of this method is obvious, and the gain to the patient is so great that the practice of giving large curative injections of the serum to the children has resulted in cutting short the convalescent period by many days.

The above results both in the curative and immunizing dos-

ages would justify the continuance of serum administration after the above fashion, if for no other reason than that it has allowed the hospital to keep its doors open and conduct its work. But, in view of the great number of reported cases of "serum disease" and anaphlanis, it would be well to watch the later methods of serum production and secure a purer antitoxin, or resort to the only other method of producing immunity, that is, by the use of diphtheria toxin or diphtheria vaccine, to produce a more lasting immunity.

A LAYMAN'S VIEW OF HOSPITAL WORK.*

By J. Ross Robertson,
Chairman of the Board of Trustees of the Hospital for Sick Children, Toronto.

During the past thirty years I have every year visited Great Britain and the continent of Europe, and nearly every State of the American Union. During these visits, interested as I am in hospital work in this city of my birth, I naturally felt interested in this work in other cities. My visits were not inspired by curiosity. My idea was to gather knowledge, so that the particular class of work which I had at heart might be benefited. When I tell you that these visits covered not only close inspection of the work, but heart-to-heart talks with the superintendents, lady superintendents and matrons of all the principal hospitals for adults in large cities of Europe, Great Britain and Ireland and the United States, and in every hospital for sick children in the same area, I think you will admit that my mileage ought to have been given me an experience in the line of information-getting that should have availed to advantage the institution that I am connected with, and so it did. I, of course, took it for granted that in all these great hospitals good work was being done in the surgical and medical departments by the skilled men who were in charge. Of surgery and medicine I know nothing, and this paper concerns only the business end of the work that is in your care and mine.

It struck me during my tours that in Great Britain, Ireland and the United States and Canada the layman plays a most important part. The largest and best hospitals in Great Britain owe their foundation and construction to the energy, enterprise and philanthropy of laymen—investments that total up millions and millions of pounds in sterling money, either left by bequest or paid during the lifetime for palatial edifices to shelter the sick and afflicted—all from the pockets of laymen.

Hospitals may be dependent for support in part from governments and from municipalities, or from voluntary contributions, but in the final analysis the layman pays the bill, and, be it said, as a general rule he does it ungrudgingly. Hospital construction and reconstruction is going on all over the British Empire, its colonies and in the United States of America. These buildings are constructed largely by the contributions of laymen.

* Read at the Annual Meeting of the American Hospital Association, Toronto, September 30th, 1918.

Hospitals have to be maintained. It is a comparatively easy matter to build a hospital. The maintenance is a horse of another color. Appeals have to be made to the public. The Provincial Governments in Canada do their share, and pay a per head per day rate, and so do some of the corporations that govern cities, but the deficits—and deficits are inevitable—have to be made up by the layman. There are various phases of the hospital problem that appeal directly to laymen, and it is a pleasure to see the faithful work of business men who, even if they are a bit short in the line of this world's goods, are long in the line of giving attention to hospital work.

The management of hospitals, and how to make such management effective, is a problem that has in a way yet to be solved. My information and my experience point in the direction of small boards of management. Given a first-class superintendent, man or woman, to look after the work in the surgical and medical sides; a lady superintendent for the training school for nurses —if there be one—and a manager to cover the business end—all these under a small board of four or five trustees who are interested in the work, should suffice for the management of any hospital on this continent.

Some people think that the business end of a hospital's work should be managed by a business man who is not a medical man, and I share this opinion; but I am at the same time bound to admit that I have the pleasure of knowing quite a number of medical men who manage both the medical and the business end in hospitals in the United States and Britain, and their work in management cannot be excelled. At the same time one can point to any number of cases where hospitals have suffered materially from the combination.

Hospitals with large boards of management, made up of representatives of municipalities and institutions either directly or indirectly affiliated in the hospital's work, do not seem to pursue the even tenor of the way that should be followed by organizations of that kind. The composition of boards of management is open to criticism. Citizens are appointed who have little or no interest in hospital work. They put in an appearance during the primal stages of their careers on the board, after which their interest wanes, and they are never in evidence unless some friend wants a position, and then they are sure to be on hand to cast their votes.

The fact is that they obtain positions on the board because they are prominent citizens, prominent, perhaps, because they have more figures at the balance of their bank account than or-

dinary people, or because of their political affiliations they like to see their names in cold type in hospital literature, so that they may be known to the public as prize medal philanthropists.

Some of them, as an American friend of mine has said, rarely see the inside of the hospital with which they are connected, save and except when some public function occurs, and at which they are, of course, always in evidence.

On the other hand, there are trustees who are always on the job. Some have sense enough to act as trustees should act, and if they have to criticize the work they do so to those who are in official charge. Other trustees, however, undertake to regulate everybody in the institution, from the general superintendent down to the genial and hard-working domestic who struggles with the scrub brush on the floor of the outdoor department. The latter variety of trustee fortunately does not often get into the forefront, but when he does get in his deadly work he creates friction that leads occasionally to the resignation of the entire staff, and leaves the institution in such a chaotic state that recuperation and convalescence absorb months, and sometimes years, of time. Cases on both sides of the Atlantic—a noted case in England some time ago—are proof of the truth of my statements.

There should be no interference by a lay board with the work of the medical staff, and likewise there should be no interference by the medical staff with the business management of the hospital. There is a proper way of adjusting difficulties, and so avoiding friction. Whatever is wrong can readily be righted when the entire facts are laid before the Board or Committee of Management. Cases can be cited in Great Britain and on this continent where this clashing of interests has led to disaster. Small boards and competent subordinates in management have worked out best in hospital work. There is no use for hospital managers being blown about by every wind of doctrine. Every special theorist must not be allowed to have his finger in the pie, exploiting his pet fads at the expense of the hospital.

The desirability of reducing the number of the medical and surgical services in hospitals prevails to-day to a greater extent than ever before. It promises to result in the concentration of responsibility and unity of effort. Of course, it is a difficult matter in some hospitals to reach that point, but the day may come when a single service in each department with a head and competent subordinates may be attained. The German hospitals that I have visited follow closely on these lines, and so do some in Great Britain, and a few on our side of the Atlantic.

Distinguished professional men, such as Dr. Mayo, of Rochester, and Ochsner, of Chicago, advocate this principle, and it is their opinion as a result of their experience in examining the systems and workings of the principal hospitals of the world.

Boards of management composed of laymen favor to-day, more than ever, the adoption of this principle to a greater or less extent. The institution with which I am connected introduced this system in Canada, and it has been adopted with success in other hospitals of the Dominion.

Years ago the handling of the public was a problem that puzzled hospital management. But tact and good judgment exercised by superintendents and managers have largely eliminated the difficulties presented in the olden time. The public to-day are less critical and more reasonable in their views of hospital treatment. Scores who years ago would shy at entering the ward of a hospital as patients to-day are only too clamorous for it. The dread of a hospital and the discredit attached to being a hospital inmate have entirely disappeared.

A small percentage of the public are under the impression that when they enter the pay ward of a hospital the fee for lodging and maintenance covers the charge for treatment. They apparently forget that the physicians and surgeons give their services free to those who cannot afford to pay—so that those who can pay must pay. The hospital is not a pauperizing institution.

The outdoor department of a hospital is always more or less a source of trouble, in that care has to be exercised in regard to those who should receive free treatment. My experience is, after years of careful watching, that if proper means are adopted nearly all cases of imposition can be detected. I have had each year for some years past a personal investigation made into probably a thousand cases of outdoor applicants, where the inspector has visited the homes and the families concerned, and he found that not more than five per cent. could afford to pay even a trifle, and that the percentage of imposition was infinitesimal.

Let me say that we safeguard ourselves with a signed certificate from a clergyman or well-known citizen before giving relief on the second application. I found while in England last month that there is a great movement to try and establish some intermediary department as between the hospitals and their outdoor departments, the idea being that the hospitals would only take those duly certified by the dispensary of the district.

A hospital for the sick poor should not have private or semi-private wards unless there is a distinct separation between the

funds subscribed for philanthropic objects by the public and the more or less revenue-producing wards of the hospital. The want of money for maintenance naturally drives hospital managers to the installation of private and semi-private wards as expedients for raising funds to carry on the work. I suppose that till the happy time arrives when hospitals will have ample balances on the credit side of their bank account, the installation of private and semi-private wards will continue.

The great hospitals of London, such as St. Bartholomew's, Guy's, St. Thomas, East London and University College, have no private wards. St. Thomas has, however, a private building for private cases entirely separate and distinct from its general work. Of course, there are in London many nursing homes, as they are called, that supply the places of the private wards in hospital work.

Annual reports of public institutions may be included in the lists of latest publications, but notwithstanding the interesting topics therein discussed, hospital literature, be it said with regret, is not sought after by those who look for popular reading at the counters of circulating libraries. The day has not arrived—it may be on the way—perhaps it has a stop-over ticket—when popular literature will have as one of its competitors the hospital report.

It struck me ten years ago that the driest and most uninteresting reading was our annual report. The subject matter was all right, but it did not seem to be placed before the public in proper form. So I commenced to illustrate our reports. I got away from the stereotyped official expressions that such reports are generally loaded up with, and, instead of the report reading like "the minutes of the previous meeting," I told all about our work in story form.

I sub-headed the reports according to subjects. I used a good calendered paper, and called to my aid the photographer and the engraver. I gave in half-tones the actual daily life in the wards. I exemplified our work in the orthopedic branch by ordering that every case of clubbed feet, in fact every surgical case that could be photographed, should be so done. I photographed every case the day it entered and the day it was discharged. I half-toned these photos, one of which showed the crippled boy when he was admitted to the hospital, and another when his deformity was corrected. The publication of these photos of "Before and After" the operation were admirable exemplifications of our work—a first-class object lesson that brought coin to our coffers, for the public realized just the great amount of good we were

doing. I followed this "Before and After" idea up in cases of bow legs and knock knees, and also in every case of hare-lip that had successful results.

The daily life in our wards—the nurses moving about from bed to bed—the children at their games—all had to answer the call of the camera. All material was made available for illustration, even the taking of a swab and its progress through the culture tube, the incubator, on the slide, with the stain and under the micro; a plaster jacket in all its stages; the search for the nickel in the gullet of some youngster who swallowed the coin instead of buying the candy; a needle from its point of entry, and its travels till located by the X-ray—all these are brought to the public eye through our fifty-six page report. We publish 12,000 of these, one for every donor; and we also issue a booklet of 24 pages with our larger report, condensed in paragraph form, and interspersed with small half-tones. Of these we send out 225,000 copies.

We advertise, and, what is more, pay for advertisements in the Toronto daily papers, and all this literature we send out just before Christmas is at a cost for postage of about $2,500, and when we count our cash about the first of March we generally average about $30,000 as the result of our appeal. Our example has been followed to a limited extent by some of the Irish hospitals for sick children. I'll send all of you a copy of our next annual report.

During the past thirty years hundreds of thousands of dollars have been received from voluntary contributions by the Hospital for Sick Children. A general impression prevails that the money for the support of the hospital comes from the pockets of the wealthy. Now, an intimate knowledge of the sources that sustain our work shows that we receive the dollars and dimes of the many rather than the donations of the few.

Of course there are noble and notable exceptions—one at least in our history aided us with a gift of $10,000, the largest the hospital ever received from one individual benefactor in his lifetime. The experience of one other Canadian city differs, and your experience in American cities may differ from ours. Our experience is that the millionaire and his money are not soon parted, when the hospital has no other security to offer than that inventoried in the words of Holy Writ: "He that giveth to the poor lendeth to the Lord."

In all hospitals where there are training schools for nurses the management of these schools is, as you all know, in the charge of a lady superintendent. It has often occurred to me that these

women who hold such responsible positions do not get, in some cases, the cheerful consideration they should get from medical superintendents and boards of trustees.

In fact, I know of cases in parts of this continent where, to use a familiar expression, the lady superintendent has "a hard time." I have had the pleasure of meeting the lady superintendents of the continent in the annual meetings of their Association, and in very many of the hospitals in which they are engaged in their work of training and caring for the nurses of their schools. My opinion is that no class of women engaged in hospital work deserve more kindly treatment and encouragement than they do. The pathway of their work is not one strewn with roses, and should be made as pleasant as possible by kind words and attention and consideration to the suggestions they have to make to better the condition of their pupils and to improve the routine of the daily labor that falls to their lot.

The housing of nurses is a feature that deserves far more attention than it gets to-day from hospital managers all over the world. My visits to hospitals during the past thirty years have shown me that in scores and scores of institutions on both sides of the Atlantic the care of the nurse is only a minor consideration. True, in some of our large cities of this continent and of Great Britain conditions have materially improved, and there are perhaps fifteen or twenty residences that are models in comfort and sanitary equipment. These young women deserve the best consideration. They come to us in good health, and should leave us on graduation in undiminished health. I have seen residences, or rather accommodation for nurses, in some parts of the United States, yes, in Great Britain, the condition of which is a serious reflection upon boards of trustees and managers.

A hospital is a place where health should be preserved as well as being restored. There should not be one principle for the wards and another for the nurses' residence. Most nurses don't get sufficient rest. Their labor is too continuous and severe. Be it said that the hands of many lady superintendents of training schools are tied in their effort to get proper accommodation for the nurses. The appeal of the superintendent for better accommodation is made to the trustees. The appeal gets to their board room table, and either gets into the file box or into the waste paper basket.

The selection of resident physicians—I mean the fourth and fifth year youngsters who have to put in their full year at hospital work before they can have "M.D." upon their door plate—is very important. It is a difficult matter to pick out of thirty

or forty applicants just the four or five that will fill the position satisfactorily. It is comparatively easy to find their status during their school life, but because they are good men—yes, even honor men—it does not follow that they are suitable for resident positions in hospitals. The feelings of not only medical superintendents, but lady superintendents, should be consulted. Table manners and general deportment may not be on the curriculum of medical colleges, but they are not a negligible quality in hospital life and administration. A careful scrutiny into personal habits and conduct should be exercised before the residents are introduced into hospital life.

When they are selected they should have proper accommodation, and made comfortable for their work. Their duties are onerous, and in food and lodging they should be under the best conditions. Every man should have a separate room—if possible, a bedroom, siting room and bathroom. The want of space in older hospitals makes it difficult to effectively carry out the accommodation suggested. The perfection of comfort for resident physicians is to be found in the Western Infirmary in Glasgow, where a small bedroom, with a small sitting room and bathroom attached, is provided for each resident. It may be difficult to provide this accommodation in older hospitals, but in those now being constructed on this continent it would be a simple matter, and not so very expensive.

May I, in conclusion, express the hope that my good intentions and earnestness will not lead any of you ladies or gentlemen to assume that I regard myself as an oracle in hospital management. It was the custom in my early days as a printer fifty years ago to ask the "devil" at the close of the first day of apprenticeship one question, and that question was: "Are you sorry you learned the printing business?" It is just as impossible for a grown man to learn the hospital business in the years I have given to the work as it was for the boy to learn to master the secrets of "the art preservative" on the first day of his apprenticeship. I have not learned the hospital business, but I am not sorry I tried to learn the mysteries of your work and mine. We are all of us soldiers, not conscripts, but volunteers in the armies that keep step in the great march of mercy.

I am glad to be with you in this great council of war, where we meet as Americans and Britishers, each separated in allegiance to the ensign of our affection, but united in loyalty to the humanity which is above all nations.

HOSPITAL CONSTRUCTION.

By John N. E. Brown, M.D.,
Superintendent Toronto General Hospital.

To the Members of the American Hospital Association:

Mr. President, Ladies and Gentlemen,—The imperfections of this paper will be shared by yourselves; for, like Tom Sawyer's friends, you have helped me to whitewash the fence. Realizing my limited knowledge on hospital construction and the little time I have had to study such a comprehensive subject, recourse was had to yourselves for information. You have carried the bricks up the ladder; I have tried merely to lay them in place. I must thank those who replied very cordially.

Summary of Questions.

The questions related to site, style of building, construction material, heating, ventilation, number of beds in wards, classification of patients—as to ability to pay and as to disease, convalescent patients, kitchen, operating room, call system, provision for domestics, laundry, pathological department; and last, and, perhaps, most important of all, one to which fewest answers were given, the request to know the faults and defects in your own hospitals and any special ideas you had in respect to hospital construction generally. This question was asked in pursuance of a recommendation from Professor Osler to "Find out the mistakes the other fellow makes and then don't make them." You, no doubt, deferred answering this question until after you had heard this paper; therefore, it will be now your duty and your privilege to make your confession. Only a few of the points I shall dwell on briefly.

Site.

From the ninety-five replies received concerning sites, the expressions "ideal," "perfect," "first-class," "very much," "unsurpassed" were applied to hospitals in suburban or residential districts, such as the Michigan Hospital for the Insane; The Memorial Hospital, Canton, Ohio; The Homeopathic Hospital, Rochester; The Eastern Maine Hospital; St. Joseph's Hospital, Glace Bay; The Brockton Hospital, Massachusetts, and a number of others.

Hospital sites referred to as "good," "satisfactory," or liked

"O.K." and "well," are the Centenary, St. Louis; Mercy Hospital, Chicago (Central); Worcester, Massachusetts (Residential); Lebanon, New York (high hill); Bell Memorial, Kansas City (suburbs); Macan Hospital, Georgia (central, on a hill); and many others, some central, some suburban.

The chief point in favor of the central location is that it is good for business—convenient for accidents and emergencies. It is generally more convenient also for the medical staff and medical students. A teaching hospital should preferably adjoin its medical college, a point to be considered in the choice of site. The superintendent of a large hospital in Chicago confesses that he dislikes the central location of his hospital. Where a hospital, though central, is located near a park, no strong objection is urged against its position. Placing the patients' welfare uppermost, I have no hesitation in saying that a hospital placed beyond the noise of the traffic of the city, and completely removed from the vicinity of its smoke and germ-laden atmosphere, is the ideal spot. Sir Henry Burdett, one of the greatest British authorities, advocates that *all* sick people requiring hospital attention should be cared for in such a location—in the "Hospital City."

Let us for a moment consider the arguments which lead up to the conclusion that such a site is ideal. Drugs are every day becoming more distrusted by scientific therapeutists. Fresh air, sunshine, rest, proper diet, together with good nursing, have very largely taken their place. We are already utilizing as much as possible such means as are at hand—balconies, roof gardens and our grounds.

The value of light as a therapeutic agent has been rightly much advocated during the past few years. Some hospitals are spending thousands of dollars yearly in providing this form of treatment, with good results. An eminent specialist in light therapy, whom I saw this summer, informed me that one of his patients, a lady suffering from lupus, being obliged to go to the mountains for her holidays beyond the reach of Roentgen and Finsen rays, was directed by him to expose the ulcer to the direct rays of the sun for a certain portion of each day. The ulcer healed. Without doubt, the *perfect* site should afford air of the utmost purity, a maximum of sunshine, and perfect quietude—three most desirable adjuvants in the cure of disease.

There is only one word to be said in respect to the size of the site, and that is that it should be as large as possible. The Beverley Hospital, Massachusetts, has ten acres; Evanston Hospital, Illinois, five acres; Worcester, Massachusetts, seven acres; the

Municipal Hospital, Philadelphia, fifty-eight acres; St. Joseph's Hospital, Cape Breton, four acres, with a farm near by; William Backus Hospital, Norwich, Connecticut, twenty acres; Wolfsboro Hospital, New Hampshire, twenty-five acres; Agnew Hospital, California, three hundred and twenty acres. I should like to have a farm adjoin my ideal hospital.

A large site outside of the city limits can be purchased, as everyone knows, very much cheaper than an urban site, and where the amount of money available for a new hospital is limited the amount saved by building in the suburbs can be applied to construction and equipment. The average length of patients' stay in such a hospital is some days less than in a hospital in the city.

Style of Building.

The battle still wages over the style of building, as it does over most questions relating to hospitals; and the last word has not yet been said. Twenty years ago, when our knowledge of bacteriology began to influence hospital construction, the one-storeyed pavilions, separated from one another by corridors, over high, open basements, were much in vogue, particularly on the Continent of Europe. This Continental influence did not affect the larger centres of the British Isles, and has not influenced construction very markedly in America. The notable exceptions are to be found in the Johns Hopkins Hospital, Baltimore; the Presbyterian Hospital, Philadelphia; a hospital in Colorado, and another in Mexico.

Dr. Gilman Thompson, in a paper published during the past year, expresses his high appreciation of the construction of the Policlinico, Rome; the Virchow and the Moabit Hospitals, of Berlin, and the Bouciaut Hospital, Paris. The Virchow covers 96 acres; it has 53 separate buildings, with a capacity of 1,650 beds. The cost was $2,250 per bed, which corresponds to $2,500 and $3,000 in this country. A favorite arrangement in these Continental hospitals is a pair of pavilions connected with a double-storeyed service building—these comprising a unit. Dr. Thompson is much enamored of this arrangement of buildings, as it permits of a much better classification of patients, is much cheaper in construction than the "sky-scraper" variety, and has much to do with a pleasanter and quicker convalescence.

On the other hand, in many of the large cities in Great Britain and America, of late years, the tendency has been to construct multi-storeyed hospitals in a central location, most recently exemplified by the New Jefferson Medical College Hospital Phila-

delphia. This building, eleven storeys in height, was completed last year at a cost of one million dollars. It accommodates three hundred patients. Such hospitals, while possessing very many virtues—being of first-class construction, compact and concentrated, convenient for business (if I may use the term), for administration, and for medical students, yet it is open to the objections I have referred to above. In the Continental variety, on the other hand, the spread over such an enormous extent, the cost of heating, the porterage of food and other supplies, and the difficulty of supervision would be well-taken objections.

The chief points, of course, to be kept in mind in considering the style and size of the hospital building or buildings, are the extent of the site, the number of patients to be accommodated, the character of the diseases to be treated, whether medical students are to be trained in it or not, and the amount of money at the disposal of the Building Committee. In the larger hospitals construction ought to be fireproof. For the small hospital and the one-storeyed hospital this feature is not so important.

While preparing this paper my mind has been dwelling on the construction of hospitals of the larger type, because we have for the past year been planning for the construction of a four hundred bed hospital in this city. Our plans include an administration building, running east and west, to contain, in addition to the administration offices, internes quarters and private wards. Running across each end of this building is to be placed a five-storey pavilion, one for medicine, the other for surgery, the later having a two-storeyed operating department attached. Separate from this group of buildings an out-patient department is to stand, and also a domestic building, the latter to contain the kitchen and quarters for employees. In one corner of the grounds is to be placed the Nurses' Home. These plans, however, are subject to modification.

Where funds are not sufficient for separate pavilions, it is possible to effect a grouping of these departments, as has been done in the new Royal Victoria Hospital, Belfast. Here is a hospital, one storey high, with three hundred beds, which was constructed for one thousand five hundred dollars per bed. It is the most unique hospital I have ever seen. The wards, eighteen in number, lie side and side direct, each with an A shaped roof, through which sufficient light seems to be admitted. The administration building and the Nurses' Home are adjacent multi-storeyed buildings. The kitchen is in the basement, the out-patients' department is connected by corridor, and the superintendent's residence, the laundry, and the pathological department

are detached buildings. Heating and ventilating are provided by the Plenum system.

Size of Public Ward.

Your recommendation as to the number of patients in a public ward runs from forty down to four. The favorite sized ward is twenty—twenty superintendents giving that as their idea of the right number. Seventeen superintendents recommend a twelve-bed ward. A few superintendents agree with Ochsner and Sturm that a still smaller ward is more desirable—that no ward should hold more than four to six patients. It would appear to me that twelve should be the minimum number of patients in a public ward and the maximum about twenty. This view is supported by a good many nurses whom I have interviewed while on duty. I do not think we can afford in a large hospital to build a ward running north and south, in which the sun will shine morning, noon and night, to hold less than twelve or fourteen beds. When the ward comes to be smaller than that we must introduce the corridor, which shuts out half the sunlight, that is, if the ward runs east and west. In our experience, I find that a night nurse has considerable difficulty in keeping an eye on twenty to thirty patients when housed in several small wards; whereas the night nurse who looks after this number of patients in one or two wards finds much less difficulty.

Ventilation.

The ventilation of hospitals may be generally divided into several sorts.

First we have natural ventilation, by means of windows and openings through the walls to the outdoor air. These facilities, plus the fireplace, constitute the favorite kind of ventilation in a number of the larger hospitals in London, England, and New York. Dr. Gilman Thompson strongly favors this system of ventilation.

In the Western Infirmary, Scotland, the air is admitted to the ward through openings in the walls behind hot water radiators, enters the ward, and, after being utilized, is extracted through openings near the ceiling by means of a fan operating at the top of the building. This system gives satisfaction there. The only objection I heard to it in that country was that if there were any mal-odors near the ward they would be sucked into it. I think this is not a strong objection, because the sanitary towers, so common there, are practically cut off from the ward. The objection I have heard to its use in Canada and Northern United

States is the danger that the water in the radiator may freeze and burst the pipes should any of the nurses or employees turn the valves off. I should be pleased to hear opinions on this point.

Then there is the Plenum system. This consists in pumping fresh air through water trickling down moist curtains, and, in winter, over hot water radiators; forcing it into the ward about the centre of the side walls and out through openings near the floor into flues which connect with a shaft ending in a protected turret at the top of the building. Supplementary hot water coils are placed contiguous to each ward, as may be found necessary, the heat from which may be utilized or not. This system I have heard condemned strongly in London, England; in New York, Chicago, and other American cities, but it appears to be working satisfactorily in the new hospital in Birmingham, a large new hospital in Paisley, and the new Royal Victoria Hospital in Belfast.

The City of Worcester Hospital has what might be called a Plenum system plus exhaust fans, the foul air being drawn into chambers in the basement. Four to eight thousand cubic feet per patient are pumped through the wards. The twenty-five motors which run the fans are one-half to two horse power each. By this system, of course, the hospital is heated and ventilated at one and the same time. The Worcester people say the results are eminently satisfactory. It may be remarked that the Superintendent of the Michael Reese Hospital, Chicago, where I saw a much similar system in operation two years ago, vigorously denounced it. Some hospitals in the Old Country where the Plenum system has been tried have abandoned it because nurses and patients developed anæmia. In one of the Glasgow hospitals where it was used the superintendent was not enthusiastic over it.

The New Jefferson Medical College Hospital has an exhaust system, the draft being made by coils of steam pipes placed in foul air shafts, which lead to the top of the building. It is noiseless in operation. A similar principle is in operation in some other hospitals, the exhaust pipes being connected with the main chimney stack.

Two or three hospitals report that they have what is called the Sturtevant system. The latest building introducing it is the new St. Luke's Hospital, Cleveland. Dr. Pickard, Superintendent, says: "It is a modern fan system, differing from all others that I have seen in that it sends to each room a double conduit, one-half of which is for hot air and one-half for cold air. Where it enters the room the amount of either kind to be admitted is regu-

lated by a single lever. This system seems to be very complete, although we have not tried it out thoroughly."

Direction of Wards.

Ninety out of one hundred superintendents who were good enough to report to me recommend that wards should run north and south. It seems a pity that authors of our new work on hospital construction have recommended (indirectly) the restriction of the amount of sunlight in wards. To my mind, no ward can get too much of it. In this part of Canada, where we have so much dark weather from November to May, we are glad to see as much of the sun as possible, love to see it flood the wards, bathing the patients from head to foot. Very rarely do we find them complaining of too much of it, and when we do it is very easy to place a screen so as to put their eyes in shadow.

Dr. A. D. Macintyre, of the Kingston General Hospital, in a paper on fumigation, read at the last meeting of the Canadian Hospital Association, after pointing out the futility of the ordinary method of the gaseous fumigation, as usually carried out, said: "We should use all means of disinfection, such as taking the fixtures out of the room and exposing them to the sunlight and fresh air, then thoroughly wash the walls, floors and woodwork. Keep everything exposed as long as possible to the direct action of fresh air and sunlight, or, in the absence of the latter, to diffuse daylight. These are the agencies that have thus far tided us over in spite of faulty fumigation, and we should certainly give the credit where it is due."

Arrangement of Ward Dependencies.

A great feature in the arrangement of ward dependencies is to have them convenient, in order to save labor and make the necessary work as easy and pleasant of performance as possible. A London hospital, and a new one being built in Paisley for sick insane people, have the bath rooms, closets and slop rooms opposite the centre of the ward. This arrangement, though somewhat lessening the amount of sunlight, to my mind is most convenient for nurses and orderlies. In the Old Country generally these conveniences are placed in sanitary towers at the distal end of the ward. This appears to me to be more desirable than having them placed near the diet kitchen, linen closet and other dependencies of the ward, in which case nurses and orderlies, bearing urinals and bedpans, at meal hours meet other helpers bearing the meals of the patients, which I consider objectionable. The

toilets should be capacious. I have a most favorable recollection of observing in the old Pennsylvania Hospital, Philadelphia, that the closet is large enough and its doors wide enough to admit a bed. The beds are on wheels, and can easily be moved by the orderlies into the closet when the patient wishes to use the bed-pan. This custom obviates the creation of a mal-odor to the disgust of the other patients in the ward.

My favorite ward would be at least fourteen feet high and twenty-eight feet wide, with a balcony running along the east and south sides, part of which can be closed in with glass and warmed in winter time. The door or doors leading to it should be wide and conveniently placed. The bottom of the door, of course, should be flush with the floor of the ward and the balcony. The floor of the balcony should be of glass or some material which will allow as much light as possible to enter the ward below.

Roof gardens are desirable, but only for such patients as are able fairly well to look after themselves. All bed patients and other patients requiring observation should be under the convenient supervision of the nurse who is in charge of the ward to which they belong. A recent observer states that enough outdoor accommodation should be provided to accommodate at least one-half of the patients in a hospital.

The Hospital Unit.

In this connection I might for a moment advert to the hospital unit, a feature one notices in the Old Country hospitals more than he does in those in the United States and Canada. In several of the British hospitals I was interested in noting on one flat a large ward of some twenty patients for men, with sanitary towers at the distant end of the room, and the nurses' room, kitchen, linen closet, etc., at the near end. On the same floor, not far away, similar provision is made for females suffering from similar diseases. Between the two is a small suite of three rooms, the house surgeon's quarters. If the cases are surgical an operating room is attached. A small clinical laboratory is also convenient. These forty to fifty patients were looked after by one sister (head nurse); they were in charge of one house surgeon and in the service of one visiting surgeon and assistants. It is easy in such cases to keep track of the supplies which are given out to the officers in charge of such a hospital unit, and comparisons may be made weekly or monthly with other similar units. This arrangement makes for economy in administration.

Operating Rooms.

The operating rooms of the hospitals you represent may be roughly divided into three classes as to size. Here are some of the dimensions of the larger: 50x50, 50x180 (total superficial area), 44x45, 60x60; seats five hundred; seats one hundred. Next in size: 25x32, 23x35, 30x35, 30x16, 32x40, 28x30. 30x40, 40x40. The smaller and most common are as follows: 10x15, 16x18, 20x20.

The favorite operating room is about 20x20 feet in dimension, with tiled floor and tiled wainscoting. As subsidiary rooms there are an anæsthetic room, a sterilizing room, an instrument room, a wash-up room, with conveniences, and a surgical room. Some hospitals have a recovery room near the operating room; others have their recovery room off the main surgical ward.

Where the operating department is under the charge of a special nurse who has nothing to do with the before and after treatment of the patient, my preference is to send the patient to a quiet room adjoining the surgical ward to which he belongs. In cases where the nurse who has charge of the patient during the operation, as well as before and after, *i.e.*, where the surgical unit system obtains, it does not matter so much.

Operating rooms are often ventilated by the same system which is used to ventilate the whole building. Many hospitals have a separate system for the operating room, in which fans are used on the Plenum and exhaust system. Probably the greater number of operating rooms have merely the natural method.

The favorite lighting for an operating room is from a north window and a skylight. These are sometimes combined by the use of a window similar to that used by photographers, facing the north star.

Duplicate instrument sterilizers are convenient in the operating room. The hot and cold water sterilizer may stand in an adjoining room, connected with the operating room by means of pipes and taps. The dressing sterilizer should be in a separate room, unless the operating room is a large one, such as in the new St. Luke's private pavilion, New York.

The tendency to-day is against the old-style operating room, with its amphitheatre arranged to seat a multitude of students. This witnessing the spectacle was not very helpful in teaching students the art of operating, and, I predict, will soon be a thing of the past. There is a new operating room in a hospital in Naples about 16x16. Running around its walls, about six feet from the floor, is a balcony, from the edges of which are glass

partitions sloping up towards the centre of the ceiling. Students lean against a railing behind this and look almost directly down upon the operation. By this arrangement I should fancy they may see more of what goes on than is possible in any other sort of theatre.

In visiting many American hospitals last year I felt convinced that it was a wise thing to mass operating rooms. I am not so convinced of this as I was, since visiting the excellent hospital presided over by our honored visitor, Dr. McIntosh. I would like to hear some discussion on this point.

Accommodation for Private Patients.

Most superintendents present act as hosts to the millionaire as well as to the pauper. The care of patients who pay for more than the cost of maintenance constitutes one of the modern problems of hospital management, both in America and the British Isles. Here we charge our patients about all they can afford. They leave the hospital, reading the motto over our door, "I was sick and ye visited me," with a smile; and when the appeal is made to them for financial assistance they do not respond as they would to a pure charity.

A phase of the opposite situation was presented to me rather strongly this summer by an executive officer of one of the large hospitals in London, England. Over the door the sign, "Supported by Voluntary Contributions Only," met the eye of the curious cis-Atlantic visitor. This gentleman informed me that a considerable number of the patients treated have sufficient money to pay, or in part pay their way, but the hospital, although greatly needing money, received nothing or very little for the care given them.

This problem of looking after the patients who can afford better accommodation than the public wards has been dealt with in the most satisfactory way up to date by the St. Luke's Hospital, New York, and the St. Luke's Hospital, Chicago, in the erection of a hotel pavilion, in which all such patients are cared for by themselves. In our own Province the question has been best solved by the National Sanitarium Association, which has provided both in Muskoka and in Weston (a suburb of Toronto) two separate sanitarium buildings. The one at each place is used for free patients only, and for the support of these two free institutions strong appeal is made to the public for funds. The other two buildings are remote only half a mile from the corresponding free institutions, and take paying patients; the profits from the

two latter institutions are applied to the maintenance of the two former.

Laundries.

In American hospitals the laundry is in the basement. top floors and in separate buildings. In the larger hospitals the favorite location is a separate building placed somewhat centrally to the adjoining buildings. In many cases it is located in the same buildings as the boilers and engines, and in some instances is placed in a building which also contains the kitchen.

Kitchen.

Kitchens are found in basements, top floors, and occasionally half way between the basement and attic. In some of the larger institutions they occupy separate buildings. The favorite location where there are a number of pavilions is in a separate building, in which one finds the officers, employees, and sometimes the nurses' dining rooms. It is connected with the patients' building by corridors, the food being carried on trucks bearing jacketed hot water food containers destined for the serving room of the ward. In the multi-storeyed building where the kitchen is located in the basement, a convenient arrangement is to send the food directly from the kitchen by automatic food elevators direct to each serving room.

One of the main arguments for the kitchen on the top floor is the avoidance of kitchen odors through the house. Situated here, it is also easier ventilated, and usually better lighted, and hence more sanitary and more easily kept clean. The offset is porterage up and down of that portion of the provisions which constitutes the waste and refuse.

Floors.

Most ward floors are made of hardwood, maple being the favorite. A few have oak; some have pine. A number of hospitals put linoleum over the wood and are partial to it. In several hospitals the maple is laid over the fireproof concrete. An occasional ward floor is of cement, terrazzo or tile. Terrazzo is used in the children's ward in the Worcester. The New Jefferson Medical College Hospital have used a preparation called magnesite. They like it because it is non-absorbent, easily cleaned, resilient, and wears well. For operating rooms the favorite floor is tile. Next in popularity is terrazzo. A few have marble; and among the list of remaining floors we find florette, monolith, asbestolith, asphalt, asbestos, stone, murall and carbolite: while

many of the old-fashioned hospitals still use hardwood, either bare or covered with linoleum.

Schedule showing name of hospital, number of beds, cost of building, cost per patient:

Name of Hospital.	Beds.	Cost of Building.	Cost per Patient.
Rochester, City	139	$230,000	$1,654.67
State Hospital, Hazelton, Pa.	110	120,000	1,090.90
Germantown Dispensary	150	210,000	1,400.00
Chicago Baptist	100	40,000	400.00
State Hospital, Springfield, Ill.	100	7,000	70.00
Cincinnati Hospital	500	900,000	1,800.00
Bridgeport, Conn.	140	300,000	2,142.85
Homeopathic (Allan)	350	600,000	1,701.42
Lebanon, New York	250	25,000	100.00
Manhattan Ear, Eye and Throat	150	506,676	3,377.84
Allegheny General	350	600,000	1,742.85
Grace Hospital, Detroit	150	200,000	1,333.33
Worcester, Mass.	280	563,440	2,012.28
National Jewish	132	315,000	2,386.37
Presbyterian, Chicago	275	250,000	909.09
Lincoln, New York	500	350,000	700.00
St. Mark's, Salt Lake City	150	180,000	1,200.00
Newark, N.J.	340	300,000	882.35
Clifton Springs, N.Y.	400	300,000	750.00
Lowell, Mass.	150	145,000	966.66
Wesley, Chicago	175	200,000	1,142.85
Mount Sinai, N.Y.	480	1,800.000	3,750.00
Mercy Hospital, Chicago	450	460,000	1,020.20
City Hospital, St. Louis	600	800,000	1,333.33
Meth. Ep. Hospital, Brooklyn	200	800,000	4,000.00

Selected Articles.

OPENING ADDRESS—ST. MARY'S HOSPITAL—ON NEURASTHENIA.

By Sir John F. Broadbent, Bart., M.D. Oxon., F.R.C.P. Lond.

Sir John Broadbent, in the course of his remarks, said that great advances had been made in medicine, as in surgery, in recent years, but whereas in surgery the greater the advance the wider the field for the surgeon, in medicine, by a curious irony of fate, the greater the advance the more limited the scope for the physician. As a result of the progress in bacteriology, and the prophylactic and sanitary precautions rendered possible thereby, plague and cholera could get no foothold in this country, typhus was practically extinct, and typhoid fever was rapidly becoming so. Small-pox, but for recent retrograde legislation, should be in a fair way of being stamped out; diphtheria, thanks to the serum treatment, had lost its terrors; and consumption, he hoped, might, by suitable prophylactic and therapeutic measures, be got under control in the near future. He looked forward also to some Utopian era when such diseases as influenza, pneumonia, measles, scarlet fever, and the like would become more or less extinct as a result of the proper ventilation of offices, shops, public buildings, and private houses, and other sanitary measures such as the avoidance of overcrowding, the abolition of children's parties, and the habit of indiscriminate kissing. This latter should not be a hardship if they accepted the schoolboy's definition of a kiss, "that it is just putting your mouth to a person's cheek, and drawing in your breath so that you make a little noise, which is not bad, but it does nothing in the way of helping you to love the person."

There would still, however, be left to the physician a host of other maladies which we need not enumerate, and among them was what he considered one of the most serious disorders of the present day—neurasthenia, or nervous breakdown, as he would prefer to call it. By this he did not mean the born-tired feeling of the unemployable, or the *blasé* invertebrate condition of the born-rich without occupation, but the loss of nerve control and of mental energy which came to the neurotics when the

nervous system was strained to breaking point. In such a case a patient would look to the physician to assume command. Unfortunately, the tendency of a large section of the British public at the present time was to take no physician at all, but to take some of the secret so-called remedies for every ill, that were advertised in such a bare-faced manner in the daily press. It was calculated that over 2,500,000 pounds sterling was spent on this kind of trash during the past year. He though that if the medical profession would set to work and see that some legislation was adopted to check the indiscriminate sale of these articles, they would do more good than constantly crying out about hospital abuse by patients who could afford to pay. Personally he had seen very few who could be suspected of coming to his out-patient department under false pretences, and they were at St. Mary's Hospital safeguarded against such abuse by the services of an inquiry officer, who investigated the financial position of any doubtful case, and referred the patient to a special committee, who rejected him if he could afford to pay a doctor. This precaution should be adopted by all hospitals, and he thought that it would be an excellent thing if there were some co-ordination of hospitals with neighboring provident dispensaries, so that cases unsuitable for treatment at the former could be referred to the latter.

There were some points, however, in out-patient work, which, in his opinion, were eminently unsatisfactory from the point of view both of the physician and of the patient. The first of these was the treatment of the consumptive patient. In this country the excellent results obtained at the Frimley Sanatorium by Dr. Patterson and Dr. Inman, both St. Mary's men, by the scientific methods they employed in utilizing the opsonic index as a means of graduating the amount of work which could be safely undertaken by convalescent patients, had shown how the consumptive working man could be restored to a condition of health and bodily vigor such that he could again undertake the most arduous manual labor. It would, however, be many years before the supply of sanatoria for the poor could possibly equal the demand. In the meantime it was desirable and essential for the proper control of the disease that there should be some co-ordinated medical and sanitary supervision, not only of cases awaiting sanatorium treatment, but also of the large number of cases considered too advanced for this. Another question which was a pressing one at the present time was that of the dental needs of the poor. Personally he should like to see the work of their hospital's own dental department extended to the filling

of teeth and the supply of dentures. Of course, that would be a mere drop in the ocean in respect of the needs of London, but, if this work were carried out at all the general hospitals, and special dental departments were started at the provident dispensaries, substantial help could be afforded. As a prophylactic measure, children at county council schools should be instructed as to the necessity of the toothbrush as a hygienic measure. As an additional precaution, there might be a dental inspection once or twice a year, and those requiring treatment could be drafted off to a dental department.

There was one other point he would like to touch upon. In the out-patient department they saw many distressing cases, in which the bread-winner, though seriously ill, was unwilling to give up his work and come into hospital for a time, though the rest and treatment there afforded might avert a fatal issue, as he said that this would mean starvation for his wife and family. He would like to see the hospital in touch with some charitable agency, so that some provision could be arranged for the support of the wife and family while the breadwinner was temporarily incapacitated. He was sure there would be little difficulty in raising a special fund for the purpose, and he thought that some charitable agency, such as the Charity Organization Society, would be only too glad to act as almoners to the fund. In these days, when so much was done for the unemployed, for whom work and a comfortable berth at a farm colony were provided by public subscription, he believed it was time that something should be done for the genuine working man, who, from no fault of his own, was temporarily incapacitated by illness.

Replying to a vote of thanks for his address, Sir John Broadbent created much laughter by reading a letter from a young man who had been a victim to dyspepsia for some time, and who wrote that, having heard that typhoid fever was a specific for his ailment, if it were possible to be inoculated with typhoid fever, he would be very willing to make the experiment.—*Medical and Press Circular.*

ADDRESS AT THE MIDDLESEX HOSPITAL, OCTOBER 1, 1908.

By Mr. Rudyard Kipling.

After Mr. Kipling had presented the prizes to the successful students, he delivered the following address:

Gentlemen,—It may not have escaped your professional observation that there are only two classes of mankind in the world—doctors and patients. I have had some delicacy in confessing that I have belonged to the patient class ever since a doctor told me that all patients were phenomenal liars where their own symptoms were concerned. If I dared to take advantage of this magnificent opportunity which now is before me, I should like to talk to you all about my own symptoms. However, I have been ordered—on medical advice—not to talk about patients, but doctors. Speaking, then, as a patient, I should say that the average patient looks upon the average doctor very much as the non-combatant looks upon the troops fighting on his behalf. The more trained men there are between his body and the enemy, he thinks, the better.

I have had the good fortune this afternoon of meeting a number of trained men who, in due time, will be drafted into your permanently mobilized army which is always in action, always under fire against death. Of course, it is a little unfortunate that Death, as the senior practitioner, is bound to win in the long run, but we non-combatants, we patients, console ourselves with the idea that it will be your business to make the best terms you can with Death on our behalf; to see how his attacks can be longest delayed or diverted, and, when he insists on driving the attack home, to see that he does it according to the rules of civilized warfare. Every sane human being is agreed that this long-drawn fight for time that we call life is one of the most important things in the world. It follows, therefore, that you, who control and oversee this fight, and who will reinforce it, must be amongst the most important people in the world. Certainly the world will treat you on that basis. It has long ago been decided that you have no working hours that anybody is bound to respect, and nothing except your extreme bodily illness will excuse you in its eyes from refusing to help a man who thinks he may need your help at any hour of the day or night. Nobody will care whether you are in your bed, or

in your bath, or on your holiday, or at the theatre—if any one of the children of men has a pain or a hurt in him you will be summoned. And, as you know, what little vitality you may have accumulated in your leisure will be dragged out of you again.

Calls on Medical Men.—In all time of flood, fire, famine, plague, pestilence, battle, murder, and sudden death, it will be required of you that you report for duty at once, that you go on duty at once, and that you stay on duty until your strength fails you or your conscience relieves you, whichever may be the longer period. This is your position. These are some of your obligations, and I do not think that they will grow any lighter. Have you heard of any legislation to limit your output? Have you heard of any bill for an eight hours' day for doctors? Do you know of any change in public opinion which will allow you not to attend a patient when you know that the man never means to pay you? Have you heard any outcry against those people who can really afford surgical appliances and yet cadge round the hospitals for free advice, a cork leg, or a glass eye? I am afraid you have not.

It seems to be required of you that you must save others. It is nowhere laid down that you need save yourselves. That is to say, you belong to the privileged classes. I am sorry you have met my demonstration with a certain amount of levity. May I remind you of some of your privileges? You and kings are about the only people whose explanation the police will accept if you exceed the legal limit in your car. On presentation of your visiting card you can pass through the most turbulent crowd unmolested and even with applause. If you fly a yellow flag over a centre of population you can turn it into a desert. If you chose to fly a Red Cross flag over a desert you can turn it into a centre of population, towards which, as I have seen, men will crawl on hands and knees. You can forbid any ship to enter any port in the world. If you think it necessary to the success of any operation in which you are interested, you can stop a 20,000 ton liner with mails in mid-ocean till the operation is concluded. You can tie up the traffic of a port without notice given. You can order whole quarters of a city to be pulled down or burnt up, and you can trust on the warm co-operation of the nearest troops to see that your prescriptions are properly carried out.

The Gifted Amateur.—To do your poor patients justice, we do not often dispute doctors' orders unless we are frightened or upset by a long continuance of epidemic diseases. In this case, if we are uncivilized, we say that you have poisoned the

drinking water for your own purpose, and we turn out and throw stones at you in the street. If we are civilized, we do something else, but a civilized people can throw stones, too. You have been, and always will be, exposed to the contempt of the gifted amateur—the gentleman who knows by intuition everything that it has taken you years to learn. You have been exposed—you always will be exposed—to the attacks of those persons who consider their own undisciplined emotions more important than the world's most bitter agonies—the people who would limit, and cripple, and hamper research because they fear research may be accompanied by a little pain and suffering. But you have heard this afternoon a little of the history of your profession. You will find that such people have been with you—or, rather, against you—from the very beginning, ever since, I should say, the earliest Egyptians erected images in honor of cats—and dogs—on the banks of the Nile. Yet your work goes on, and you will go on.

You remain now, perhaps, the only class that dares to tell the world that we can get no more out of a machine than we put into it; that if the fathers have eaten forbidden fruit, the children's teeth are very liable to be afflicted. Your training shows you that things are what they are, and will be what they will be, and that we deceive no one except ourselves when we pretend otherwise. Better, still, you can prove what you have learned. If a patient chooses to disregard your warnings, you have not to wait a generation to convince him. You know you will be called in in a few days or weeks, and you will find your careless friend with a pain in his inside or a sore place on his body precisely as you warned him would be the case. Have you ever considered what a tremendous privilege that is? At a time when few things are called by their right names—when it is against the spirit of the time even to hint that an act may entail consequences—you are going to join a profession in which you will be paid for telling man the truth, and that every departure you may make from the truth you will make as a concession to man's bodily weakness, and not mental weakness.

Realizing these things, I do not think I need stretch your patience by talking to you about the high ideals and the lofty ethics of a profession which exacts from its followers the largest responsibility and the highest death-rate—for its practitioners—of any profession in the world. If you will let me, I will wish you in your future what all men desire—enough work to do and strength enough to do the work.—*Medical Press and Circular.*

Editorials.

THE UNIVERSITY MEDICAL FACULTY AND ITS DEAN.

We believe there is a universal feeling of regret that Dr. R. A. Reeve has sent in his resignation of the position of Dean of the Medical Faculty of the University of Toronto. In many universities the dean of a medical faculty is not expected to look after all the details of administration, but is looked upon simply as a presiding officer, whose chief duty is to act as Chairman at faculty meetings. Dr. Reeve, however, has done much more than this. He has taken a deep interest in all the complicated machinery of the faculty, which has grown tremendously during his regime, and has conscientiously done an enormous amount of work.

It is probable that no one person fully appreciates the amount of work that he has done. While this is true, most, if not all, who have watched his course agree that his work has been magnificent; as captain, he has been patient and fair-minded under many trying circumstances, and has materially helped in carrying the ship through some rather serious storms. We offer our sincere congratulations to Dean Reeve for the great work which he has done.

We understand that his resignation has not yet been accepted, and that he has been asked to remain in harness a short time longer.

We have no desire to say much as to his successor, but we believe it would give general satisfaction if Dr. Temple, who was Dean of Trinity Medical College when the amalgamation took place, were appointed. We do not know, however, whether he would be willing to accept the responsibilities connected with the position. He is not the sort of a person who seeks such honors, but he is a strong, able and highly respected man, whose appointment at the present juncture would, in our opinion, be a graceful and wise act.

RESIDENCES FOR THE UNIVERSITY OF TORONTO.

Three handsome residences for male students of the University of Toronto have been built, at a cost of $165,000, of which Mr. E. C. Whitney, of Ottawa, contributed $55,000. The Government gave $50,000, the balance of $60,000 being contributed chiefly by Messrs. Lash, William Mackenzie, Hiram Walker & Sons, W. T. White, E. R. Wood, J. W. Flavelle, Miller Lash, Lever Brothers, and Dr. F. S. Pearson, New York.

The buildings will accommodate 150 students, and are situated at the north-east corner of Hoskin and Devonshire Avenues, immediately south of the athletic field.

Each residence has three floors, traversed throughout by a hall off which rooms open. These rooms are arranged in a variety of ways—some being single rooms, but mostly studies, with two or three bedrooms off each. The construction being terra cotta and concrete throughout, all the buildings are fireproof. On each floor there are two bathrooms, with basins and shower baths. A prominent feature of each residence is a large common room opposite the main entrance, and at the top of the stairway on each floor.

The students will simply be lodgers in these residences, and will take their meals in the Students' Union Dining Hall.

THE INTERNATIONAL CONGRESS ON TUBERCULOSIS, WASHINGTON, D.C.

For the first time since its organization, the International Congress on Tuberculosis has met in America. The registration was about 7,000—the largest in its history. The effects of this great gathering of scientists, clinicians and social workers must be far-reaching. No one could attend the sessions, and hear the discussions without becoming thoroughly imbued with the necessity of action—prompt action—in the institution of measures designed to lessen the prevalence of tuberculosis along the

line indicated in the resolutions, which were endorsed at the general meeting of the Congress on the last day.

The exhibit of the Department of Health of the City of New York shows positively what can be done in a large city to lessen the mortality from consumption. The campaign against tuberculosis has been waged steadily and persistently since 1895, and the measures which have been instituted have lessened in a notable manner the annual deaths from this disease. Notification has been adopted, supervision instituted, hospitals, sanatoriums and dispensaries provided, fumigation carried out in all cases after death or removal, unsanitary tenements condemned, and other regulations enforced.

There can be no doubt that every measure that makes for a higher standard of living is of value in the campaign against tuberculosis, and that improved sanitation has done much to lessen the mortality in recent years in England and Prussia.

In his lecture on the decreased mortality from tuberculosis in England, Dr. Arthur Newsholme made the statement that 1 per cent. of the population live in institutions—hospitals, poorhouses, asylums—and that, in some cities, over one-quarter of the deaths from consumption were reported from hospitals. The removal of these patients, generally the very poor, from their homes when in the advanced stages, removes many foci of infection, and has been one of the factors in lessening the mortality. Would that our Canadian hospitals made provision for these patients. From the report made to the Congress by the Canadian Committee, we learn that British Columbia, Alberta and Saskatchewan now require all hospitals receiving provincial aid to provide beds for consumptives in special pavilions or tents. Vancouver General Hospital has a special building for their care. In the East, with a few exceptions, such patients are not admitted to the hospitals, but must die at home or on the street, unless taken in hand by other agencies. In towns and counties where there are already existing hospitals, and the number of cases of advanced tuberculosis present does not warrant the erection and maintenance of a special hospital, the situation must be met by setting aside a ward, or building a

pavilion for their case. Infection of attendants and staff never occurs in sanatoriums—it will not occur in hospitals, if nurses are instructed in the care of the consumptive—and provision for consumptives in our hospitals would be made at once on the request of our profession. Has not our profession been responsible for their exclusion: yet what grounds are there for it, other than a mistaken idea as to its infectivity, and the one reason—which is a genuine one—that our hospitals are for acute cases only.

We must regret that the Canadian exhibit was so small. From the Pathological Museum, McGill University, were 82 specimens illustrative of tuberculous affections of various organs and tissues in man and animals. Tranquille was the only sanatorium represented, and there was a collection of literature from the Canadian Association for the Prevention of Tuberculosis. The work being done by the National Sanitarium Association, the Montreal League, the Toronto Free Hospital for Consumptives, the Hamilton Health Association, and other agencies in Canada would have compared most favorably with that from other countries.

Canada, with a population of 6,500,000, loses 13,500 citizens each year by tuberculosis. Our profession must do its part in awakening our authorities—Dominion, provincial and municipal —to the necessity of more active measures in its suppression. The State of Pennsylvania, during the past five years, has given $500,000 to special hospitals and sanatoriums, and last year the State Board of Health received an appropriation of $1,000,000 to combat the disease.

The International Congress has outlined methods of work. Let the profession and the people ask our governments for like appropriations, and we shall get it if we show that we are in earnest.

Among the Canadians in attendance were the following members of the Ontario Board of Health: Dr. Sheard (Chairman), Dr. Hodgetts (Secretary), and Dr. McAllister, of Chatham. They are very enthusiastic, and say that the Congress was a remarkable success in all respects. The Congress lasted three

weeks, and among those present were many of the greatest scientists of both the old and new worlds. Dr. Sheard tells us that perhaps the most eloquent of these distinguished men was our good friend, Professor Landouzy, Dean of the Medical Faculty of Paris.

One of the most interesting features of the Congress was the preparation of abstracts of all the papers by a committee having special charge of the work. Complete sets were made in four languages—English, French, German and Spanish—and each member, when he registered, received one of these sets.

HUMAN AND BOVINE TUBERCULOUS DISEASE.

The press of both the United States and Canada paid much attention to the Washington Congress, and some of the reports caused considerable surprise.

We are told by the *New York Medical Journal* that they were "almost unanimous in circulating false reports." "They went so far as to put a striking statement into the mouth of an eminent physician who was not even present on the occasion when he was said to have proclaimed it. They have sedulously given their readers to understand that a rancorous controversy took place as to the reality of human tuberculous disease of bovine origin, and have pictured almost all the other participants in the Congress as manifesting violent opposition to Koch's well-known views on the subject. The actual proceedings did not justify such a picture. Koch was greeted with general enthusiasm, and with the deference due to such a distinguished man of science. Those who dissented from some of his views on the relations between human and bovine tuberculous disease expressed themselves courteously, and with no more warmth than the vast importance of the subject called for.

Koch does not seem to have receded essentially from the position which he took in London six years ago. He does not deny that the human and the bovine tubercle bacilli are of one species, though he still insists that they show certain recognizable differences.

As we understand it, Koch admits the transmissibility of bovine tuberculous disease to the human subject, but insists that it has not yet been demonstrated that pulmonary manifestations of the disease occur when it is thus transmitted. Even on this point, however, Koch urges that further investigation be carried on, and he specifies the conditions which, in his opinion, ought to be observed in subsequent researches.

In the meantime, of course, the world must conduct the struggle against tuberculous disease on the assumption that he is mistaken; we must neglect no means to restrict the possibility of human infection from bovine sources."

The International Medical Congress.

Arrangements are being made for this meeting, which is to be held in Budapest, August 29 to September 4, 1909, and the committee wishes to remind the medical profession that contributions to the Congress must be announced to the Secretary before January 1, 1909. Manuscripts should be in the hands of the Committee by January 31, 1909. Attention is also called to the fact that the time allowed for the reading of a paper is not more than twenty minutes. The request is made that manuscripts be clearly written, as the proofs are to be corrected at the office of the General Secretary. Copies of manuscripts will be returned by July 31, 1909. The General Secretary of the Congress is Professor Emil Grosz, M.D., Budapest, VIII., Esterhazy-utcza 7. Blank forms of application for membership to the Congress and for the presentation of papers can be obtained from the Secretary of the Canadian Committee, Dr. W. H. B. Aikins, Toronto.

The Board of Governors of the University of Toronto have made the following appointments:

Dr. M. M. Crawford, demonstrator in obstetrics; Dr. G. W. Ross, assistant in clinical medicine; Dr. E. C. Burson, demonstrator in clinical medicine; Dr. W. H. Cronyn, assistant in clinical medicine; Dr. R. W. Mann, assistant in clinical medicine; Dr. J. H. McPhedran, assistant in clinical medicine; Dr. E. E. Cleaver, assistant in clinical laboratory; Dr. H. S. Hutchison, demonstrator in clinical medicine; Dr. E. S. Ryerson, assistant curator of the pathological museum; Dr. F. W. Rolph, assistant in clinical laboratory; Dr. O. T. Dinnick, demonstrator in

clinical surgery; Dr. E. Gallie, demonstrator in clinical surgery; Dr. A. B. Wright, demonstrator in clinical surgery.

Class assistants in pharmacology—P. B. MacFarlane, L. B. Robertson, F. C. Harrison, A. B. Maclaren, W. F. I. Dey; Dr. W. S. Lemon, demonstrator in therapeutics.

Personals.

Dr. G. Alexander Davies announces to the profession that he is confining his practice exclusively to Diseases of the Eye, Ear, Nose and Throat.

Dr. J. S. Fitzgerald, Clinical Director and Pathologist at the Toronto Asylum, has gone to Boston as a voluntary assistant in neuropathology and experimental pathology in Harvard Medical School.

Lieut.-Col. Jas. A. Grant, M.D., of the Permanent Army Medical Corps, has been appointed temporarily to the post of principal medical officer of Western Ontario, in the place of Lieut.-Col. Nattress, deceased. It is expected that the appointment will soon be made permanent. Col. Grant is the son of Sir James Grant, of Ottawa, and was educated at Queen's University, Kingston.

Obituary.

SIR ARTHUR VERNON MACANN, B.A., M.B.

Sir Arthur Macann, King's Professor of Midwifery, Trinity College, Dublin, formerly Master of the Rotunda Hospital (1882-7), died of heart disease Sept. 25th, aged 65.

WILLIAM GEORGE TYNER, B.A., M.D.

Dr. Tyner, of Whitby, was found dead on the roadside between Belleville and Picton early on the morning of October 15th. His automobile lay on the top of him, and he had evidently been killed instantly. It would appear that he had gone off the road in the darkness. He was 33 years of age, and had practised in Picton about seven years. He graduated B.A. in 1878, and M.D. in 1901, from Queen's University, Kingston.

Report of Medical Societies.

INTERNATIONAL CONGRESS ON TUBERCULOSIS.*

By Dr. J. H. Elliott.

Secretary Canadian Committee of International Congress.

This Congress, which meets every third year, has met this year in Washington, its deliberations there occupying the week September 28—October 3. During the previous week Philadelphia was visited, and the subsequent week, Baltimore, Boston and New York. The first and third weeks were devoted principally to visiting and inspecting sanatoriums, hospitals, dispensaries, and other institutions in and near these large cities.

The week in Washington was taken up with papers and discussions thereon, morning and afternoon, with public lectures during the evenings. The Entertainment Committee saw that there were no idle moments, all time not taken with actual work of the Congress being filled with hospitable functions, affording the foreign visitors many pleasant hours and allowing them to carry away delightful recollections of the days spent in the Capital.

In the month of May, when President Roosevelt accepted the presidency of the Congress, he intimated that official duties might prevent his presiding at the opening meeting of the Congress. Secretary Cortelyou was deputed to preside on the first day, at which session the various foreign delegates presented their credentials on behalf of the governments represented.

At the closing session on Saturday, held in the Congress Hall, in the immense new National Museum, Mr. Cortelyou again presided. Previous to the hour of 11 a section of the Marine Band delighted the audience with its superb music. When the session was called to order the resolutions of Congress were read, then the various delegates delivered their messages of farewell, filled with expressions of gratitude for the pleasure given them while in America.

The representatives of the various countries who spoke were: For Argentina, Dr. Fermin Roderiguez; Austria, Dr. Hermann van Schrotter; Belgium, Dr. Denys; Canada, Dr. Frederick

* A Report made to the Section in Medicine, Academy of Medicine, Toronto, October 13, 1908.

Montizambert; China, Dr. Jee; Costa Rica, Dr. Juan J. Ulloa; Cuba, Dr. Diego Tamayo; Denmark, Dr. Bang; Egypt, Dr. J. B. Piot Bey; England, Dr. Thomas J. Stafford; France, Prof. Landouzy; Germany, Dr. Von Leube; Guatemala, Mr. R. Bengoechea; Japan, Dr. G. Suto; Hungary, Dr. Detre; Italy, Dr. Stella; Mexico, Dr. E. Liceage; Holland, Dr. N. Th. Tendeloo; Norway, Dr. F. C. Harbitz; Panama, Dr. Martin J. Echeverria; Roumania, Dr. S. Trimescu; Russia, Dr. A. A. Wladimiroff; Siam, Paul G. Wooley; Spain, Dr. Camile Calleja; Sweden, the Hon. Conrad Cedercrantz; Switzerland, Dr. O. Amrein; Uruguay, Dr. Luis Melian Lafinur.

Scarcely had these felicitations ended when President Roosevelt appeared and made his way through the crowded hall to the front of the platform amidst tumultuous applause. As soon as order was restored and greetings given to the Chairman and Secretary, he characteristically plunged at once into his address, which is well worth reproducing:

"I could not deny myself the privilege of saying a word of greeting to this noteworthy gathering. It is difficult for us to realize the extraordinary changes, the extraordinary progress, in certain lines of social endeavor during the last two or three generations, and in no other manifestation of human activity have the changes been quite so far-reaching as in the ability to grapple with disease.

"It is not so very long, measuring time by history, since the attitude of man toward a disease such as that of consumption was one of helpless acquiescence in what he considered to be the mandates of a supernatural power.

"It is but a short time since even the most gifted members of the medical profession knew as little as any layman of the real causes of a disease like this, and, therefore, necessarily, of the remedies to be invoked to overcome them. It is an affair of decades—I am almost tempted to say an affair of years—when we go back to cover the period in which progress has been made.

"Take, for instance, the work that the United States Government is now doing in Panama. When the first railroad was built across Panama it was said, with some foundation of truth, with but slight exaggeration, that every sleeper laid cost the life of a man. Now the work on the canal, in that identical place, is being prosecuted, on an infinitely larger scale, of course, than the mere building of a railroad, under conditions which make the locality stand above the ordinary locality in the United States in point of health.

"The Isthmus of Panama, which was a by-word for fatal diseases, has become well-nigh a sanitarium; and it has become so because of the investigations of certain medical men, which enabled them to find out the real causes of certain diseases, especially yellow fever and malarial fever, and to take measures to overcome them. The older doctors here, when they were medical students, would have treated the suggestion of regarding mosquitoes as the prime source of disease like that as a subject for mirth. Isn't that literally true?

"These utterly unexpected results have followed patient, laborious, dangerous, and extraordinarily skilful work that has enabled the cause of the disease to be found and the diseases themselves to be combated with extraordinary success. I said dangerous work. That success had its martyrs; doctors laid down their lives to secure the results of which I have spoken, showing exactly as much heroism as ever was shown by the soldier on the field of battle.

"At this moment in the middle of the continent of Africa there is a peculiarly fatal and terrible disease, the sleeping sickness; a disease which, if it had been known to our ancestors in the Middle Ages, would have been spoken of as the Black Death was spoken of in the Middle Ages—as a scourge sent of God, possibly as something connected with a comet, or some similar explanation would have been advanced. We now know it is due to the carrying of a small and deadly blood parasite by a species of biting fly, there being this very curious genus of biting flies in Africa, one form of which, although harmless to wild animals and man, conveys by its bite a fatal infection to all domestic animals, and even to the closest allies of the wild animals, to which its bite is fatal; while the other form, which does not seem to be fatal to domestic or wild animals, is responsible for the spread of this terrible disease, the sleeping sickness, which in one region killed 200,000 out of 300,000 inhabitants—a rate of slaughter, of course, infinitely surpassing that of any modern war.

"And the chance to control that disease lies in the work of just such men as, and, indeed, of some of the men who are assembled here. You who have come here, however, have come to combat not a scourge confined to the tropics, but what is on the whole the most terrible scourge of the people throughout the world. But a few years ago hardly an intelligent effort was made or could be made to war against this peculiarly deadly enemy of the human race.

"The chance successfully to conduct that war arose when the greatest experts in the medical world turned their trained intelligence to the task. It remains for them to find out just what can be done. The task then will be for the representative of the government to give all possible effect to this conclusion of the scientific men.

"The change in the status of the men of science during the last century has been immeasurable. A hundred years ago he was treated as an interesting virtuoso, a man who was capable of giving amusement, but with whom no practical man dealt with any idea of standing on a footing of equality.

"Now, more and more, the wisest men of affairs realize that the great chance for the advancement of the human race in material things lies in the close interrelationship of the man of practical affairs and the man of science, so that the man of practical affairs can give all possible effort to the discoveries of the most unforeseen and unexpected character now made by the man of science.

"I feel that no gathering could take place fraught with greater hope for the welfare of the people at large than this. I thank you all, men and women of this country, and you, our guests, for what you have done and are doing. In behalf of the nation, I greet you, and I hope you will understand how much we have appreciated your coming here."

Dr. Antonio Stella, representing Italy, formally invited the Congress to meet next in Rome in 1911, on the occasion of the celebration of the fiftieth anniversary of the Eternal City as the capital of modern Italy. Seconded by Dr. Abraham Jacobi, of New York, "the grand old man of science," the invitation was accepted by a rising vote.

In response, Dr. Stella spoke feelingly of the cordial reception shown the delegates to the Congress by the American people, and added that when the Congress gathered in Italy delegates "would find that, though Italian civilization was more than 3,000 years old, modern Rome was but fifty years young." Dr. Stella supplemented his invitation with a greeting from King Emmanuel, communicated through Baron Mayor des Planches, Italian Ambassador to the United States.

For the discussion of papers the Congress was divided into seven sections, which met morning and afternoon. In addition to the section work, there was a tuberculosis exhibit, representing 438 contributors, 312 within the United States, 126 foreign. Of these, 222 were collective contributions, that is, from associa-

tions, societies and other corporate bodies, and 216 were from individual members of the Congress. This exhibit represented as well as possible the progress and achievements of the whole scientific world in its struggle against tuberculosis since the discovery of the tubercle bacilli in 1882. The extent of this may be appreciated in saying the exhibits were listed in a catalogue of 300 pages and covered almost every phase of the tuberculosis question. The Pathological Department showed cultures of bacilli on various media, infected organs and tissues from man and animals, tuberculous meat condemned at the abattoirs; the Boards of Health showed what is being done by states and municipalities; associations exhibited photographs and charts illustrative of their works; sanatoriums showed plans, models and photographs of infirmaries, pavilions, tents and other buildings; dispensaries and their work were well explained by models and photographs; playground associations showed some splendid models. Germany sent one of the government's travelling exhibits, tuberculose-wandermussum; there was a model dairy with cows milked daily, milk bottled and stored, bacterial counts made and posted; dustless sweepers, census methods, racial incidence. Everything relating to tuberculosis seemed to be somewhere present. Practically every civilized country and state was represented, from Argentine and Austria to Uruguay and Wisconsin. The various exhibits were demonstrated each day in one of the four official languages.

The sections were divided as follows:

Section 1—Pathology and Bacteriology.

Section 2—Clinical Study and Therapy of Tuberculosis-Sanatoria, Hospitals and Dispensaries.

Section 3—Surgery and Orthopedics.

Section 4—Tuberculosis in Children—Etiology, Prevention and Treatment.

Section 5—Hygienic, Social, Industrial and Economic Aspects of Tuberculosis.

Section 6—State and Municipal Control of Tuberculosis.

Section 7—Tuberculosis in Animals and its Relation to Man.

Section 1 devoted much time to the question of tuberculins and immunity, holding one joint session with Section 7 on the relation of human and bovine tuberculosis. Though the work of the other sections presents much that is valuable and practical, a short review of Sections 1 and 2 would seem of most interest to present to this section of our Academy.

Rosenau (Washington) spoke of the difficulty in distinguish-

ing between live and dead bacilli; both may produce somewhat similar effects in animals; the failure to make secondary inoculations causing great discrepancy in experimental results. The thermal death point is well established—60° C. for 20 minutes or less. Weinzirl's experiments showed that direct sunlight usually killed the B. tuberculosis in two to ten minutes; diffuse light materially shortens its life, the organism being killed within a week. This has its practical application in the importance of light in dwellings.

André (University of Lyons) reported that flies are active agents in the dissemination of Koch's bacillus, because if opportunity offers they are constantly going back and forth between contagious sputa and feces and foodstuffs, which they pollute with their feet and excretions. Bacilli appear in the excretion of flies six hours after ingestion of sputum, and some may be found as long as five days later. Food polluted by flies thus fed contains infective bacilli and produces tuberculosis in guinea pigs; flies also absorb bacilli contained in dry dust. The sputa and feces of consumptives must be disinfected and kept from flies. Rosenberger (Philadelphia) made a further communication on the presence of bacilli in feces. Tubercle bacilli were found in the feces of every patient when demonstrated in either sputum or urine, and in many cases in which the tuberculous process was either of the acute miliary type or seemingly of a strictly localized nature (*e.g.*, glandular, etc.) These bacilli in feces were found to live in water for over a year. It is most important to know that bacilli may be present in the urine and feces of almost all cases of tuberculosis, whether genito-urinary, intestinal, respiratory or glandular. This has its bearing on the infectiousness of sewage and of the water supply. Prof. Wm. T. Sedgwick, of Boston, has shown that for every death from typhoid fever avoided by the purification of polluted water supplies, two or three deaths are avoided from other causes, and among these "other causes" pulmonary tuberculosis holds an important place. In the report "Tuberculosis in Massachusetts" he shows conclusively that polluted water supplies appear to increase the general mortality of communities from tuberculosis: pure water supplies to diminish that mortality. He draws attention to the fact that in Hamburg the mortality rate from tuberculosis fell much more rapidly after the installation of sand filters, corresponding to the result of similar studies made in Massachusetts. This conveys a lesson to us in Toronto and impresses us with the wisdom of keeping our lake supply clear of sewage contaminations.

Woods Price (Saranac Lake) reported experimental work, showing that the forks, spoons and tea cups used by advanced consumptives carry living tubercle bacilli, but none are found after ordinary good washing with hot water.

The Cutaneous and Conjunctival Tuberculin Reactions.—These were discussed by Calmette, Von Pirquet, Wolff Eisner, Baldwin, Detre, and others. Some of the conclusions regarding use of the conjunctival tests were: (1) Weak solutions (½ per cent.) have value in confirming a diagnosis of tuberculosis in early stages. (2) Instillation should not be repeated. (3) The reaction has little value when symptoms of tuberculosis lead only to a suspicion. (4) It should be used in adults only. (5) It is dangerous in eye affections and often so in strumous children.

The cutaneous test of Von Priquet appears to be valuable in diagnosis in children. Of 68 children who reacted and died subsequently, 66 showed microscopic tubercles on post-mortem examination; one showed a pleuritic adhesion.

Detre, of Budapest, claims by the use of three different substances, (*a*) concentrated old tuberculin, (*b*) filtrate of culture of human bacilli, (*c*) filtrate of culture of bovine bacilli, to be able to differentiate the type of infection—whether human or bovine. His results, confirmed by others in Hungary, show that more than 90 per cent. of all pulmonary cases exhibit human reaction, whereas in visceral and surgical cases (adults) bovine reaction is demonstrated in one-third to one-half the cases.

Immunity and its Problems.—The discussion on this subject in Section 1 Thursday morning will repay anyone interested a careful perusal of the full report when it is printed. Baldwin reviewed past work in immunity production, showed that the tuberculins do not give true immunity, and that as yet we have not discovered the agent which will produce it. Living bacteria have produced a greater degree of immunity in experimented animals than dead bacilli or their products. One of the difficulties in their use has been the impossibility of regulating the dose; and this has necessitated the use of weak or non-virulent strains.

Prof. Barber (University of Kansas) demonstrated a method of giving subcutaneously one bacillus and of measuring any quantity of from one to one hundred or more. Using this technique, he had given mice an initial dose of 3 anthrax bacilli, gradually increasing to 1,500 without causing any evidence of disease. Guinea pigs had been given 1 bacillus increased to 10,000, without symptoms to date. His further communications will be awaited with interest.

In Section 2 there was a general expression in favor of the

value of the tuberculins in treatment, particularly in chronic quiescent pulmonary tuberculosis, and in surgical tuberculosis. Many cases do not respond, and it is a very dangerous drug in careless hands. No man should use it unless he has the greatest respect for its potency. Beraneck, Denys and others whose names are well known in connection with the various tuberculins. spoke on the subject. The matter was well summarized by Trudeau in his paper, where he discussed the various methods of administration—roughly three: (1) Koch's, in which a local and focal reaction was to be secured; (2) Wright's, where the doses were small and only sufficient given to keep the opsonic index above normal; (3) that of Denys and Sahli, who give increasing doses and endeavor to establish a toxin (tuberculin) immunity. Trudeau follows the latter method and endeavors to reach, without producing reaction. a toxin tolerance, whether that be a fraction of a milligram or a cubic centimetre or more. This is reached by an almost imperceptible and long-continued progression in dosage. Focal and general reactions are to be avoided, considering them merely as evidences of intolerance.

Several papers were read on the value of the opsonic index in treatment of tuberculosis. Kinghorn and Twichell conclude that it is impracticable and impossible to use the test each day on a patient, yet it has been of value in showing that the intervale between doses should occasionally be longer than three or four days. It is of doubtful value to control tuberculin injections on phthisical patients.

Flick and Landis reported that the Maragliam serum had not given good results at the Phipp Institute; in fact, had done harm in some cases.

The Relations of the Human and Bovine Bacillus.—Sections 1 and 7 discussed this together. Koch has no reason to depart from his statements made at the London Congress six years ago:

(1) The tubercle bacilli of bovine tuberculosis are different from those of human tuberculosis.

(2) Human beings may be infected by bovine bacilli, but serious diseases from this cause occur but rarely.

(3) Preventive measures against tuberculosis should, therefore, be directed primarily against the propagation of human tubercle bacilli.

It might be of interest to give here the principal part of Prof. Koch's address:

"All competent investigators agree that the tubercle bacilli of human origin differ from the tubercle bacilli of cattle, and that

consequently we must differentiate between a typhus humanus and a typhus bovinus. The British Commission also admits the existence of three differences, but as some of their cultures showed definite changes in their characteristics after passage through animals and various cultivations, they have differentiated a third group, which they call 'unstable.'

"As I have repeatedly emphasized, it is not of the slightest importance to us whether, after animal inoculation or breeding experiments, the tubercle bacillus is stable or unstable. What concerns us is behavior in the fresh condition. I am, therefore, unable to accept this third group of the British Commission, and I am satisfied with their admission that the fresh tubercle bacilli of the human type differ distinctly from those of the bovine type.

"The tubercle bacilli of the human type are characterized by the fact that they grow rapidly and abundantly in a thick layer on glycerin serum. They are virulent to guinea pigs, slightly virulent to rabbits, and almost non-virulent to cattle. The tubercle bacilli of the bovine type grow very slowly and in a thin layer on glycerin serum; they are of equally high virulence to guinea pigs, rabbits, and cattle. To my knowledge, the bacilli of the human type have never been demonstrated in cattle.

"The bacilli of the bovine type, on the other hand, can occur in man. They have been found in the cervical lymph glands and in the intestinal tract. With few exceptions, however, these bacilli are but slightly virulent for man, and remain localized. The few known cases in which the bovine tuberculosis is said to have produced a general and fatally progressive tuberculosis in man appear to me not to be above suspicion.

"In closing, I have still one point to discuss which seems to me of high importance. Of all human beings who succumb to tuberculosis, eleven-twelfths die of consumption, or pulmonary tuberculosis, and only one-twelfth of other forms of the disease. One would have expected, therefore, that those investigators who are interested in establishing the relations between human and bovine tuberculosis would have searched for bacilli of the bovine type preferably in cases of pulmonary tuberculosis.

"This, however, has not been the case. Evidently animated by the desire to bring together as many cases as possible of bovine tuberculosis in man, they have investigated particularly cases of gland and intestinal tuberculosis, and have neglected the much more important pulmonary tuberculosis. In spite of the bias under which the researches hitherto have suffered, there yet remains at our disposal a sufficient number of investigations

of pulmonary tuberculosis to warrant a provisional expression of opinion.

"The gist of it is—and I beg you to take note of it—that *up to date, in no case of pulmonary tuberculosis has the tubercle bacillus of the bovine type been definitely demonstrated.* If, on further investigation, it should be established that pulmonary tuberculosis is produced by the tubercle bacillus of the human type exclusively, then the question will be decided in favor of the view which I have upheld, and we must direct our regulations for combating tuberculosis by all means primarily against the tubercle bacilli of the human type.

"On account of the great importance of this question, I intend to undertake, as soon as feasible, experiments along this line on a broad scale. At the same time, I wish to make my plea to other tuberculosis workers that as many cases as possible may be examined to join with me vigorously in this task. But I wish to lay stress on the fact that the conditions laid down by me for the carrying out of these investigations must be followed. I consider it quite possible that, in this manner, the essential facts for deciding this important question may be collected in about two years, and be presented to the next International Congress."

While Dr. Koch's views were greeted with profound respect, it was apparent before the next speaker, Prof. Theobald Smith, of Harvard University, had finished, that the great German scientist stood almost alone in his position. Prof. Smith, avoiding scientific and academic discussion, declared it had been demonstrated that half of certain kinds af tuberculosis in children, such as those of the glands of the neck and the abdomen, are due to infection from milk.

In the case of adults, Prof. Smith agreed with Dr. Koch that any regular or wholesale conversion of bovine into human bacilli in the human body is contradicted by most of the evidence presented.

Prof. Arlong, who followed, took sharp issue with Dr. Koch, declaring that, from the standpoint of hygiene, his experiments emphasized the unity and fusion of the classic types, and demonstrated the necessity of taking precautions against tuberculosis, whatever may be its origin, human or bovine.

Dr. M. P. Ravenel, of Madison, Wis., presented the question from the American point of view. He also opposed the ideas presented by Dr. Koch.

"On the correct solution of this question depends, no doubt,"

said Dr. Ravenel, "the health of many children, and even their lives, and I would consider it an extreme misfortune not only for this country, but for every country on the face of the earth, if any impression should go from this meeting that even the small proportion of deaths due to the bovine bacillus was a negligible quantity.

"I have inoculated repeatedly," added Dr. Ravenel, "the bacilli of the bovine type, absolutely characteristic in every respect to the human, and if not recovered in culture, if examined in the tissue, you will find them beaded and stained exactly like the human bacilli. I have also demonstrated that cows cough up sputum and distribute it exactly as human beings do, and in the sputum of such cows, I have demonstrated the tubercle bacilli exactly corresponding to the human body.

"One other thing has been proved through the work all over the world, namely, that the tubercle bacilli can pass through the intestinal wall and move through the mucous membrane of different parts of the body very rapidly without leaving any mark of its passage. Demonstrations have shown that inside of four hours, in fact, inside of three and a half hours, tubercle bacilli have passed from the milk of animals through the thoracical duct, and have reached the lungs in sufficient quantities to kill other animals inoculated.

"Having demonstrated that there are a certain number of cases due to bovine tubercular bacillus; that a certain number of deaths occur from this bacillus, and having demonstrated that the tubercular bacillus passes into the stomach, or gets there from some outside source, it behooves us from every point of view to take every precaution possible against contamination of our milk. I do not think it is possible, with our present knowledge, and it will be many years before we have sufficient knowledge to determine the number of cases due to bovine bacillus as compared to those due to the human bacillus. There can be no doubt, I think, that at the present time the human phthisis is the phthisis that we must look at for the first victims.

"*I cannot agree that the proportion of cases due to bovine bacillus is insignificant.* It is an extremely important factor. I may call attention to the fact that to stamp out this disease both sides must be looked after. It is important to guard against tuberculosis in cattle, not only from the public health standpoint, but because it is a most serious economic question in every civilized country in the world, with one or two exceptions."

In opposition also to Dr. Koch was Dr. Nathan Raw, of Liverpool, who presented the views of the English delegates to the Congress. He contested vigorously the view that tuberculosis from cattle could not be conveyed to human beings.

"As a result of observation in hospitals of more than 5,000 cases," said Dr. Raw, "I am convinced that there are two distinct forms of the disease occurring in the human body. The first, or largest group, commonly called consumption, is caused by infection from person to person. The second group occurs chiefly in children, and is conveyed by tuberculous milk. I am convinced that when tuberculous cattle are eradicated, this latter type of disease will entirely disappear, but I am also convinced that consumption will only be stamped out by education, improved sanitation, and scientific treatment."

Rest and Exercise in Treatment.

The clinical section was unanimous in their expression of the necessity of rest in treatment while there was a daily rise of temperature present. There was not a general agreement as to when exercise is advisable for patients, nor as to the amount of work to be prescribed. The general impression one received from the discussion was that, making allowance for cough, dyspepsia, anemia and other conditions, slight exercise is advisable when the temperature is normal, and when it does not rise as the result of exercise. All work, of whatever form, to be begun in great moderation, and increased very gradually, under supervision; that most apyretic patients are better for some daily occupation, whether manual or intellectual, but that the keynote to success is always in individualization.

Adaim and McCrea presented an analysis of 1,000 consecutive autopsies in Montreal. Of these, 417 (41.7 per cent.) showed tuberculosis past or present, as follows: (a) healed, 151; (b) latent, 93; (c) active, but slight, 22; (d) generalized, 43; (e) pulmonary (phthisis), 85; (f) bones, 12; (g) genito-urinary, 10.

At a conference of State and Provincial Boards of Health, Dr. Rosenan, of the Public Health and Marine Hospital Service, said: "I am strongly opposed to the manufacture and sale of vaccine virus and diphtheria antitoxin by private manufacturers. Diphtheria antitoxin is sold for from $1.00 to $1.50 per thousand units, or $5.00 to $7.50 for 5,000 units, the dose now usually given. It can be manufactured and sold at a profit at 25 cents per 1,000 units. The present price is an imposition

on the poor man.'' He recommended that each state and province make its own vaccine and antitoxin, and is satisfied they can make a purer quality.

THE FINAL RESOLUTIONS OF CONGRESS ARE:

Resolved, That the attention of the states and central governments be called to the importance of proper laws for the obligatory notification by medical attendants to proper health authorities, of all cases of tuberculosis coming to their notice, and for the registration of such cases in order to enable the authorities to put in operation measures for prevention.

That the utmost efforts should be continued in the struggle against tuberculosis to prevent the conveyance from man to man as the most important source of the disease.

That preventive measures be continued against bovine tuberculosis, and that the possibility of the propagation of this to man be recognized.

That we urge upon the public and upon all governments the establishment (1) of hospitals for the treatment of advanced cases of tuberculosis.

(2) The establishment of sanatoria for curable cases of tuberculosis.

(3) The establishment of dispensaries and night and day camps for ambulant cases of tuberculosis, which cannot enter hospitals and sanatoria.

That this Congress indorse such well-considered legislation for the regulation of factories and workshops, the abolition of premature and injurious labor of women and children, and the securing of sanitary dwellings as will increase the resisting power of the community to tuberculosis and other diseases.

That instruction in personal and school hygiene should be given by properly qualified medical instructors.

That colleges and universities should be urged to establish courses in hygiene and sanitation, and also to include these subjects among their entrance requirements in order to stimulate useful elementary instruction in the lower schools.

That the Congress indorse and recommends the establishment of playgrounds as an important means of preventing tuberculosis through their influence upon health and resistance to disease.

611 Spadina Avenue.

Book Reviews.

Diseases of the Intestines and Peritoneum. New (2nd) edition, revised. By Dr. Herrmann Nothnagel, of Vienna. Edited, with additions, by H. D. Rolleston, M.D., F.R.C.P., Physician to St. George's Hospital, London, England. Octavo of 1059 pages, illustrated. Philadelphia and London: W. B. Saunders Company. 1907. Cloth, $5.00 net; half morocco, $6.00 net. Canadian agents: J. A. Carveth & Co., Limited, Toronto.

The above volume is a further addition to the series of monographs edited by Nothnagel. It is in every respect in keeping with the earlier works, which are so well known that criticism is unnecessary.

The first part deals with diseases of the intestines, which have been approached from every standpoint, the symptomatology, functional disorders, neuroses, anomalies in form and position, internal hernia, occlusion, ulceration and neoplasms are all dealt with in the fullest practical manner. Following this the peritoneal lesions are taken up; ascites, tumors and the acute and chronic inflammatory changes are all fully discussed. The volume is illustrated with a number of excellent plates. Both the paper and type used are of the best. To readers of former volumes this one needs no recommendation.

Diseases of the Nervous System. By H. Campbell Thompson, M.D. (Lond.), F.R.C.P., Physician to Out-Patients at Middlesex Hospital; Dean of and Medical Tutor in the Middlesex Hospital Medical School; Physician to the Bolingbroke Hospital and to the Hospital for Epilepsy and Paralysis, Maide Vale. London, Paris, New York, Toronto, and Melbourne: Cassell & Co., Limited. 1908.

We have before us a neat work of some 400 pages, profusely illustrated, and of such a size as to appeal to both medical practitioner and student, not too profuse for the latter, yet taking up subjects under discussion at sufficient length to satisfy the former. In the first section, the chapter on reflexes is clear and concise. Disease of peripheral nerves are then discussed, the cranial nerves in numerical order, followed by the cervical sympathetic, upper and lower limb paralysis, the last chapter dealing with multiple neuritis and neuromata.

In Section II. the myopathies and in III. the organic diseases of the cord are dealt with; the cerebral lesions are in the following section, while the remainder of the work, over 100 pages, is devoted to functional and general nervous lesions.

Throughout the text is clear. The practical side of the subject has been emphasized throughout, little space being devoted to theory. We think the portions dedicated to diagnosis will be of the greatest service in actual practice. Finally, we notice with particular pleasure the chapter on cerebral localization.

Woman. A treatise on the normal and pathological emotions of feminine love. By Bernard S. Talmey, M.D., Gynecologist to the Metropolitan Hospital and Dispensary, New York. For students and physicians of medicine. With 22 drawings in the text. Published by the Stanley Press Corporation, New York.

The author, in his preface, declares that he "Had to go fishing in the sea of medical and philosophical literature, and whole days long sitting on the shore patiently wait for a single bite in order to prepare a palatable and easily digestible mental dish for the busy practitioner among women."

We find our "mental stomach" utterly unable to assimilate this "medico-philosophical treatise."

The Ophthalmic and Cutaneous Diagnosis of Tuberculosis (the Cutaneous and Conjunctival Tuberculin Reactions, according to V. Pirquet and Wolff-Eisner) together with a discussion of the Clinical Methods for the Early Diagnosis of Pulmonary Tuberculosis, by Dr. Alfred Wolff-Eisner; a preface by Professor H. Senotar, and an introductory note to the English reader by C. Theodore Williams, M.V.O., M.D., F.R.C.P., Consulting Physician to King Edward VII. Sanatorium and the Brampton Hospital; Vice-President of the International Central Bureau for the Prevention of Consumption; Vice-Chairman of the National Association for the Prevention of Consumption). Translated from the German by Bernard I. Robert; with 2 colored litho. tables, 11 curve tables, 15 reproductions, and numerous curve figures in the text. Published in London by John Bale, Sons, Danielsson, Limited, 83-91 Great Titchfield Street, W. 1908. Copyright. All rights reserved.

The author, in the introduction, finds that he is "obliged to protest against the opthalmic reaction being frequently designated in Germany and France as "Colmette's test." " He brings forward certain points which, from the point of view of an impartial observer, certainly show that he is entitled to the full credit of the onerous work undertaken, as that at the least he should receive equal recognition. The work is of such undoubted value that no practitioner, certainly no one who is engaged in medical teaching, should be unacquainted with its contents. The conclusions are clearly put forward, the author fully recognizing that the reaction is not infallible, and what is more, the opinions of many of Wolff-Eisner's co-workers' observations and opinions are also individually quoted.

Not only are the cutaneous and conjunctival reactions treated, but in the last chapters cyto-diagnosis, thermametry, the streak diagnosis method and others have been treated, thus greatly enlarging the practical value of the work.

We beg to extend our hearty commendations to W. Wolff-Eisner on his excellent monograph.

Psychology Applied to Medicine. Introductory studies by David W. Wells, M.D., Lecturer on Mental Physiology, and Assistant in Ophthalmology, Boston University Medical School; Ophthalmic Surgeon, Massachusetts Homeopathic Hospital, Boston. Philadelphia: F. A. Davis Company, publishers. 1907.

In these days, when we have so many examples of faith cure, it is absolutely necessary that the medical man should thoroughly understand the rationale of the treatment, should be able to select proper cases, and to apply psychology therapeutically when necessary. To facilitate this, Dr. Wells has prepared a little volume which we can heartily recommend. It covers the subject lucidly and well, and puts suggestion in its proper place in the practice of medicine.

Hay Fever, Hay Asthma, Its Causes, Diagnosis and Treatment. By Wm. Lloyd, F.R.C.S.; Fellow Royal Society of Medicine; Surgeon-in-Charge of the Nose, Ear and Throat Department, Kensington General Hospital, etc. Second Edition. London: Henry J. Glaisher, 7 Wigmore St., Cavendish Square W. 1908.

In a small book of 100 pages, the author has told as much as is known of the etiology, pathology and treatment of a disease that is the *bête noir* of the medical profession. It is very interesting reading, and very helpful to everyone in general practice.

Progressive Medicine. a Quarterly Digest of Advances, Discoveries and Improvements in the Medical and Surgical Sciences. Edited by Hobart A. Hare, Professor of Therapeutics and Materia Medica in the Jefferson Medical College; assisted by H. R. M. Landis. Vol. III. Sept. 1, 1908. Lea & Febriger, Philadelphia and New York. $6.00 per annum.

This number contains articles on diseases of the thorax and its viscera, including the heart, lungs and blood vessels, by Wm. Ewart; on dermatology and syphilis, by Wm. S. Gottheil; obstetrics, by E. P. Davis, and the nervous system, by W. G. Spiller. This volume is thoroughly equal in every way to the others of their year. We cannot too emphatically state its importance to the general practitioner, as well as to the specialist.

A Text-Book of Human Physiology, Theoretic and Practical. By Geo. V. N. Dearborn, A.M., Ph.D., M.D.; Professor of Physiology in the Medical and Dental Schools of Tofts College, Boston. Illustrated with 300 engravings and plates. Lee & Febriger, Philadelphia and New York. 1908.

Written primarily for medical and dental practitioners and students, this work is so concise, and withal so readable, that it must find a good place among the host of text-books on physiology. The chapters on Diet and on Metabolism are better than anything else we have read, outside of monographs. Dr. Dearborn has drawn less freely than most American authors from other text-books, and has avoided some mistakes. But we find, on page 187, that he repeats the statement, which began with Dr. Beaumont, that the introduction of any solid substance into the stomach causes a flow of gastric juice. Pawlow proved this to be false more than ten years ago, and it is time it began to be dropped in students' hand-books.

Miscellaneous.

"Don't Give Up the—Patient.

A strong, healthy optimism is the physician's greatest asset. We have always been advising the doctor to be exceedingly careful about giving gloomy, hopeless prognoses. We do not know it all, and occasionally an apparently hopeless patient does recover. We have given some examples in a previous editorial. A very striking example is given by Prof. W. S. Thayer, of Baltimore, in his oration on medicine at the recent meeting of the American Medical Association.

A few years ago he had under his care a patient who had one tuberculous kidney removed some years before. She had then *bilateral pulmonary tuberculosis, tuberculous pleurisy, tuberculous peritonitis* and *tuberculosis* of the *remaining kidney.* The temperature for weeks had been constantly elevated, the pulse rapid and feeble. She seemed *in extremis.* Had the doctor been asked, he would have said that she had probably a few weeks to live. She asked calmly if she were going to die or whether there was any chance of recovery. He answered her truly that she was very ill, that the outlook was not good, but that there was always a chance for an arrest of the disease, and that it would be wrong to even think of giving up the fight. For two years that patient has been free from fever, to all outward appearances well, and to-day she is actually working for her living.

Dr. Thayer is right in saying that truthfulness in medicine does not mean that it is always necessary to tell the patient that he has a fatal disease if he does not ask you the direct question. Nor does it forbid the physician to seek and keep his eye fixed on the cranny of hope, which may usually be found, as earnestly and sedulously as would the patient himself.

For nothing is certain in human life, and—*errare humanum est.*

At any event, in medicine it is always beter to be too optimistic than too pessimistic.—*Critic and Guide.*

Occupation and Mortality.*

The recent triennial report of Dr. Tatham, Registrar-General, for the three years ended 902, has furnished a blue-book of more than ordinary interest. For the first time for many years it gives a comprehensive official return of the particulars of occu-

* Read at the Annual Meeting of the American Hospital Association, Toronto. September 30th, 1908.

pational mortality in England and Wales. As might be expected, the general conclusions are written in plainest type in the extremes of the list, which record the highest and the lowest average mortalities. The terrible adverse influence of alcohol upon the length of life is once again illustrated in a striking manner. Brewers exceed the average standard mortality figures by 10 per cent., their deaths being excessive under every heading except that of accidents. The direct effects are registered by a mortality from alcoholism and liver disease of three times the standard. Curiously, the excess from cancer in their case amounts to 75 per cent., a point that is worthy of careful consideration in the investigation of that disease. Indirectly, brewers suffer more severely than the average from intercurrent disease, such as influenza, and there is a marked excess in the fatality from phthisis, from diseases of the circulatory and respiratory systems, and from Bright's disease. As might be expected, these results are greatly multiplied in the case of the publicans, who between the ages of 25 and 65 years show a higher mortality than any other section in what is euphemistically spoken of as "The Trade." Under the heading, "Alcoholism and Liver Disease," the mortality is no less than seven times the standard, while from Bright's disease it is 2½ times the average; from influenza, phthisis, and diseases of the nervous system there is an excess of 70 per cent., and from diseases of the circulatory and respiratory systems it is somewhat under 50 per cent. The excess of cancer amongst the brewers is to a certain extent discounted by the maintenance of an average standard amongst the publicans, possibly because the latter are the shorter-lived, and succumb at an earlier period to other maladies. Suicide, again, shows more than twice the average of all occupations. The brunt of the sacrifice in the ranks of "The Trade" falls upon the inn-servants, the excess being most marked under the heading of phthisis. Their mortality is greater than that of the publicans from cancer, from circulatory and respiratory diseases, from alcoholism apart from liver disease, and from accident; but from all other causes the servants suffer less than the masters. Emerging from these dismal facts, however, is the ray of light visible in the statement that the figures show a distinct improvement upon those of previous years. In other words, persons engaged in the drink trade have shared in the general diminution of the death-rates of the country. Turning to the opposite extreme, we find that among the professions the clergy of all denominations easily take the first place. Between the ages of 25 and 65 they furnish a comparative mortality of 524

(as against 1,000), a result lower than that of any other except occupied farmers and other agriculturists in selected districts; while the proportion living at all ages above 65 enormously exceeds the average. Lawyers and barristers come next, and die less rapidly than medical men at all stages of life. The comparative mortality figure of the medical profession is 952. Turning to other occupations, we find much food for reflection in Dr. Tatham's figures. On the whole, the mortality from phthisis has continued to decline steadily. Among woollen manufacturers, potters, stone quarriers, and coal miners in various parts of England and Wales, there has been a marked decrease, as well as a considerable fall in the general mortality from respiratory disease amongst drapers, ironstone miners, printers and potters. It is interesting to note that even clergymen and farmers shared the general fall in phthisis mortality, although previously they had shown an extremely low mortality. The exceptions were found in messengers, menservants, tanners, lace and hosiery workers, lead workers and costermongers, amongst whom the phthisis mortality has been practically stationary; and general shopkeepers, cutlers, ironstone, copper and tin miners, general laborers, manservants in industrial districts and unoccupied males, amongst whom it has considerably increased. Another somewhat disquieting set of facts relates to alcohol. Amongst the occupations which in earlier reports were shown to be addicted to alcohol, all reappear in the present report except the hair-dressers, whose mortality from that cause has decreased by half. Among paper-hangers and wood-turners the mortality from alcoholism has shown a considerable increase, and to a less extent among the newly-introduced occupations of messengers, lead workers, tobacconists, general laborers and general shopkeepers, amongst each of which classes the particular mortality in question has substantially increased, and is now more than double the standard. In many ways Dr. Tatham's report constitutes a supplement of great statistical value to the sixty-fifth annual report of the Registrar-General.—*Medical Press and Circular.*

Opium Consumed in the United States.

During the past four years, 1903-1907, there were imported into the United States 2,436,771 pounds of crude opium (containing 9 per cent. or more of morphine), 783,258 pounds of chandu or smoking opium, and 59,000 pounds of morphine. It is estimated that from 60 to 75 per cent. of this opium is manufactured into morphine, and that 50 to 90 per cent. of the mor-

phine so manufactured is used illicitly. The habitual use of morphine is steadily becoming a national scourge. Our Chinese population is smaller than it was twenty years ago, still we are importing more than twice the amount of smoking opium than was imported then. Similar conditions exist in England, the country which, for her own commercial gain, against the entreaties and remonstrances of China, fastened the opium habit upon the Orient, and which now finds itself becoming a victim of the same curse and its chickens coming home to roose.—*New York State Journal of Medicine.*

The Treatment of Tabes.

This paper is devoted to the value of the mercurial treatment of tabes dorsalis. The prophylactic action of mercury is strongly emphasised. It is true that many have asserted that the mercurial treatment of syphilis predisposes to tabes, but there is very little evidence in support of this, and Fournier's statistics disprove it, as a considerable proportion of his cases of tabes were never treated by mercury, and of the others the proportion diminished with the increased duration of the mercurial treatment.

The author believes that occasionally complete cure of tabes may be achieved by rigorous mercurial treatment, and cites a few cases in support of his belief; but these are not critically selected and many of them are certainly open to doubt. But if complete cure is rare, it is certainly not uncommon to see the disease at least arrested by mercurial treatment; the author asserts that in none of a dozen cases treated by him in this way during the past six to eight years has the disease progressed or new symptoms appeared, while several of the patients have improved.

Finally, it is pointed out that, in some cases the shooting pains and paresthenia are favorably influenced by anti-syphilitic treatment, though in others the administration of mercury seems to increase or bring on the pains.—*Milian-Progrès Med.—Med. Chronicle.*

Treatment of Bronchopneumonic Catarrh.

A. Ferrata and A. Golonelli, of the Medical Clinic of the University, Parma, report upon the results of styracol therapy in bronchopneumonic affections, which were observed in the clinic of the University of Parma during three years. It can be stated with certainty that styracol, which is a guaiacol preparation, shows a decided influence upon the mucous membranes of the bronchi. After the use of styracol the night-sweats will

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Original Communications.

THE SPECIFIC ACTION OF RADIUM ON CERTAIN TUMORS AND ON CERTAIN REBELLIOUS SKIN-DISEASES.*

By Drs. Louis Wickham,

Physician to Saint-Lazare; Ex-Chef de Clinique at the Saint-Louis Hospital; Director of the Radium-Therapeutic Research Work in External Pathology at the "Laboratoire Biologique du Radium de Paris," and

P. Degrais,

Chief of the Laboratory at the Saint-Louis Hospital, Paris.

Gentlemen,—In Paris last year, at the ninth French Medical Congress, we read an article on the rebuilding of the tissue which comes after the exulcerative reactions caused by radium.

As a result of it, the erroneous belief has arisen with many of our professional brethren that our experiments turned out as we desired only after a necessary period of revulsion and exulceration.

To be sure, in the treatment of some diseases (pigmentary nævus[1], tuberculosis[2], scarred fibro-sclerous frenum, etc.) it is necessary to fall back upon the destructive power of radium; and, as a rule, the remarkable manner in which the new growth takes place of its own accord makes us feel confident that occasion may frequently demand the use of this method.

However, it would be strangely lowering the true value of radium and ignoring the biological interest which is inseparable from it, to limit its action in that way.

In many cases radium is, first and foremost, an agent of special election, which acts as a specific remedy and deserves this

* Tenth French Medical Congress, Geneva, September 3rd to 5th, 1908.

cognomen; that is to say, that without any inflammatory reaction resulting, without secondary exulcerative revulsion, without destruction, without radium dermititis, in a word, by the "dry method," certain tumors can be made to disappear, certain pathological tissues can be changed, can be turned from their pathological action, and be forced to give place to new tissues.

Having come, in the course of our fourth year of research work, upon the therapeutic action of radium in external pathology, it seemed interesting to us to separate from our general conclusions, which rest on our observation of six thousand or so applications of the radium apparatus to a great number of cases, the facts which bear on the specific action of radium.

This is our aim in the following report.

In certain neoplasms this specific action is exceptionally clear.

Since the time of his first research work in 1905, long before the opening of the "Laboratoire Biologique du Radium," M. Wickham has been able to prove this action on cancers of the outer skin (epithelioma) and on cheloids.

He placed cushions of hydrophillium wadding (thickly heaped up, about one centimetre, sheathed by two plates of Hamilton gold-beater's skin) between the part treated and the apparatus, making a filter, which allowed only a small quantity of the very penetrating radium rays (B strong and Y) to pass through. By this means he saw the first cancers of the skin that he treated change and actually become cured without any super-added inflammation resulting.

In his article[3] published in the "Annales de Dermatologie," in October, 1906, in which for the first time in cutaneous radium-therapeutics really therapeutic quantitative analyses[4] were formulated and proved by the positive results, he ascertained that in cases of budding epithelioma their regression without a period of ulcerative reaction even after direct applications of strong radio-active power, is possible.

Since then our research has confirmed these first observations[5], and by pushing forward into the realm of external pathology we have been able to establish and put into definite form the regular use of the different methods by which the specific action of the rays of radium has been utilized.

Among these processes it is necessary to pay chief attention to:

1. Those which make use of very strong rays B and rays Y by means of suitable "filterings" or screens.

2. Those which make use chiefly of rays B by direct[6] application of the apparatus (the applications being short in length).

3. Those which combine the action of the rays B by multiply-

ing the rays Y (such is the method of the "Feu Croisé," of which more hereafter).

By these different methods, of course used according to the nature of the lesions treated, we have obtained cures without any inflammatory reaction resulting, and consequently proved the elective action of radium by very different means.

Indeed, the number of different operative methods is almost unlimited. If direct applications can furnish very different modalities, the ways of "filtering" are as numerous as a man can invent screens; these filters may be simple or combined with the "Feu Croisé" method.

However, all these methods do vary according to the radio-active power selected, according to the surface of the apparatus (dimensions and nature; varnish or cloth, etc.; division of the radium salt), according to the length of the applications and their repetition every day or at regular intervals more or less lengthy, etc. Hence the size of the field open to investigators may be judged.

Sometimes two different methods will produce results with common features. Here is an example of this: We know now that a weak application of rays Y used alone (4000 activity) for from 70 to 120 hours in succession is able to cure as rapidly and without inflammatory exulcerative reaction, a large budding epithelioma as well as this may be accomplished by a dozen hour-long applications with very strong quantities of radium (activity 50,000, 85 to 90% of rays B and 10 to 15% of rays Y).

4. It all comes back finally to a question of dosage. The aim of our experiments is to know what proportions (quantities and qualities) are necessary and sufficient to make the specific action of radium valuable. And if our experiments aim at arranging, facilitating and regulating these proportions, it is they themselves which rule all therapeutics. In fact, progress in radium-therapeutics has been rapid only since the day when, equipped with appliances of a more comprehensive nature, we were able to recognize the radio-activity actually made use of, and to establish the first formulæ of quantitative analyses.

But what we wish to remember here is less the value and the history of the methods which make the elective action of radium profitable than the actual demonstration of its elective power.

In support of this we present to the Congress forty-three water-colored photographs which show the regressive evolution of epithelioma at different stages. The cures are made without exulcerative revulsion, as you see.

From such facts, which we perceived very early in our investigations, we have suggested the possibility of acting on malignant subcutaneous tumors.

Cancers of the breast have been the particular subject of our research, and if we cannot produce a statement of their complete cure, we are able to assert that in several cases which could not be operated upon we obtained an obvious influence over the tumor, which, as a result of treatment, was stopped in its development and in many cases kept on receding with a remarkable decrease in the accompanying pain.

Another effect of radium which it is important to notice is that which the very powerful rays may have without revulsion on the ganglion masses, caused by neoplastic encroachment. In a case of inoperable cancer of the breast, owing to glandular involvement and pressure on the trachea, we have obtained a very remarkable decrease in these subjective disturbances. Moreover, there is an edematous tumor of the arm, which has clearly become smaller as a result of treatment in the auxiliary region; all these results were obtained without surface reactions.

Are these not demonstrative facts? And are more of them necessary to bear witness to the truly elective specific properties of radium as a corrective of cancerous neoplasms?

In the course of our research work on the treatment of angioma (vascular nævi, wine-stains) by radium, we produced proofs of the same nature, and in our communication of October 8, 1907, at the Académie de Médecine[7] as well.

Large angiomatous surfaces, protuberant, erectile, throbbing, angiomatous tumors, real blood-red sacks, swollen wine-stains, could not be, without danger of hemorrhage, the seat of keen destructive reaction. The covering tissues should not be injured in the slightest degree.

With this in view, we have devised several methods of procedure, among which is that of the "Feu Croisé." This method consists in applying to the tumor several apparatus placed opposite to one another two by two, for a shorter time than that which for each of the apparatus caused a surface irritation. In length, the duration of the action as a consequence of the "Feu Croisé" corresponds to the product of the duration of the application of each apparatus, by the number of these apparatus. By this method all the rays act, both the very penetrating ones and those less so, with multiplication of the former and without surface reaction. Frequently we combined this method with the "filtering" method, and by these means were enabled to witness the dissolution of tumors, the disappearance of the throbbing, as

well as the loss of color of the angioma, which, after their giving way, have sometimes retained a surface contrasting only slightly in tint with the healthy tissues in the same region.

We have a whole series of water-colored photographs, the greater number of which deal with children; several angioma were genuine monstrosities. Every tumor, whether expanding or malignant in any degree, has benefitted very largely from this use of "dry" methods in the radio-active treatment.

But the specific action of radium is not limited to cancerous and angiomatous tumors. There is another variety of tumors, the cheloidian, which also derive benefit from it. In fact, without visible reaction, enormous cheloids may be made smooth, and the truly turgid appearance of certain complicated scars made by cheloids disappears, to be replaced by a flat scarred surface, much easier to conceal. Moreover, the specific action of radium has caused much of the pain which ordinarily accompanies cheloids to disappear.

Some water-colored photographs show the cure of these tumors by simple dissolution.

Such are the different observations which led us to communicate to the Académie de Médecine, on May 26, 1908, in the course of our report on the treatment of faulty scars, that cancerous, angiomatous, or cheloidian tumors might be united in the same group as far as the specific action of radium is concerned.

However, there is a whole other class of diseases in which radium may act as a specific.

Last year, at a session of our Congress in Paris, we placed before you an article written in collaboration with M. de Beurmann on the use of radium in certain diseases of the outer skin, inflammatory and pruriginous, which had as its aim the introduction of the analgesic action of radium.

Our later observations have merely strengthened our first conclusion. In fact, it is without determining the secondary inflammatory reaction that these affections must be treated. By applications of very short length, from one to three minutes a sitting, from a large and powerful apparatus, we found ourselves able to cure, without irritation, chronic eczema, lichen, neurodermititis. localized pruritus, and superficial neuralgia, especially that which follows the shingles.

Certain results were especially convincing. Here is an extract from an article which appeared in *La Clinique*[8]:

"A baby a year old was suffering from a bad case of pruriginous eczema, which, to its parents' great despair, had spread over its whole face and scalp. For six months, without any suc-

cess, I treated it vigorously by the ordinary means. The baby cried without ceasing, and neither slept nor ate. I decided to use radium. M. Degrais applied our powerful apparatus of exterior radio-activity 580,000 and six centimetres in diameter, on each place, the first day for one minute and a half and for the same time on the following day. A fortnight later the mother wrote us that her baby was completely well."

Other results have confirmed these facts, showing not only the specific power of radium, but also that rays of weak penetration, especially rays Beta, have as well as rays Y specific power.

So, then, this elective property of radium, which deserves the name specific, extends to a great number of cases of widely different natures. Moreover, it is not only limited to the lesions we have mentioned; some of our cases of mycosis fungoid, of psoriasis, of keratosis, have derived benefit from it; but it was not our intention to mention them, as they are at present too rare.

It is well to notice that these "dry" methods do not arouse the slightest pain, and that the ease of the applications, together with this quality of painlessness, makes it a most favorable method for dealing with children of even the tenderest age.

Such are the facts we wished to impress. Are the best methods of treatment always those which avoid inflammatory reaction? Certainly not; and in many cases, from the practical and therapeutic point of view, certain combinations (dry methods and inflammatory methods) are very useful; but the aim of this paper has not been to discuss the best methods of radium therapeutics, but merely the theory of the specific power of radium, as we saw it in our very earliest research work. We desired to establish this on a broader basis, and we think that our remarks have succeeded in doing this satisfactorily.

W. H. B. A.

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1. Wickham and Degrais, *Bulletins de la Société Médicale des Hôpitaux*, March 27, 1908.

2. Wickham and Degrais, *Presse Médicale*, February 22, 1908.

3. Wickham, "Notes on the Use of Radium in Therapeutics," *Annales de Dermatologie*, October, 1906. Masson, editor.

4. Analysis of the radiations exterior to the apparatus, alone usable; proportion of these exterior radiations in rays A, B and Y; duration and number of the necessary applications in connection with these analysis.

5. Wickham and Degrais, "Treatment of Epithelioma by Radium." Congress at Rheims, August 6, 1907. Association for the Advancement of Science.

6. The lump radiations given forth by the apparatus contain a considerable proportion of rays B. On an average, 0 to 10% of rays A, 80 to 90% of rays B, and 10 to 15% of rays Y.

7. Wickham and Degrais, "Treatment of Angioma (wine-stains and vascular tumors) by Radium." *Revue de Médecine*, June and July, 1908. Alcan, editor.

8. Wickham. *La Clinique*, March 6, 1908. Doin, editor. "Treatment by Radium of Rebellious Diseases of the Skin and the Mucous Membranes."

A CONSIDERATION OF SOME FEATURES OF INFLUENZAL OTITIS AND MASTOIDITIS.*

By Perry G. Goldsmith, M.D.,
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Mr. Chairman and Fellows,—I propose to discuss the subject of Influenzal Mastoiditis as much as possible from a clinical standpoint, giving brief notes on some cases which exemplify in a measure some of the features which stand out prominently in this disease:

1. *Bacteriological Findings.*—Speaking generally, the organisms found are staphylococci, streptococci and pneumococci, probably in this order as to frequency. Why is it that these common organisms can at certain periods of the year, when the peculiar type of colds called influenzal are prevalent, produce such rapid bone involvement, with all variations of symptoms? Is it due to something inherent in the individual, or some special lessening of the prophylactic power of his middle ear, or is it due to some undetermined difference in virulency of the organisms themselves at this period of the year? We all know that influenza varies greatly in intensity, as it were, and as to where it will strike, for example, the type producing peripheral neuritis, bronchitis, gastro-intestinal, cardio-vascular, etc., and is it not also, from our standpoint, correct to speak of a type seen in the air cells, as mastoid and accessory nasal sinuses? One may gain considerable help from the investigation of the bacteria, viz., a staphylococci culture with mastoid tenderness and free discharge is not nearly so much to be feared as a streptococcic or pneumococcic culture; in the latter, operation may be necessary without marked mastoid tenderness, and when only a temperature is to be accounted for. Personally, I consider the presence of the latter bacteria of sufficient gravity to permit a consideration of exploratory opening. The rapidity and profuseness of the culture growth may also aid in determining the virulence of the infection. One must not forget that the early bacteria findings may show streptococci and pneumococci, or even Kleb's Loeffler, which later having died out are replaced by less virulent organisms, the resistance of the tissues being now too much damaged to take care of even less virulent organisms.

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* Read at the Opthalmic and Oto-Laryngological section, Academy of Medicine, Toronto.

2. *Condition of Middle Ear.*—A chronic middle ear suppuration, in my experience, seems to lessen the liability to acute attack of *influenzal* mastoiditis. If this is not the general experience, how are we to account for the comparatively few cases of acute attacks on old suppuration, wherein the patients themselves have all the symptoms of influenza. The healthy middle ear may be able to take care of the infection, while in the antrum and mastoid it goes on to a purulent process, being shut off by granulations and swollen mucous membrane in the additus ad antrum. Then absorption may take place in some instances with cessation of all trouble, but usually the infection process continues, and is eventually operated upon. The middle ear may be inflamed by organisms which are not allowed to overcome the prophylactic powers of the tympanum, and simply an effusion, either sterile or containing a few slow-growing staphylococci. The difference between the simple and purulent case is that pus cells in any large number tend to liquify the exudate, instead of depositing fibrin, and also lead to necrosis of tympanic tissues through their solvent action. It is, therefore, not surprising that in some cases we find extensive destruction of the membrani tympani and necrosis of the ossicles. A very mild infection may cause the latter, as in places the periosteum of the ossicle may be only a layer of epithelial cells.

3. *Course the case may take when mastoid antrum is invaded.*

(1) Congestion and inflammatory infiltration of the antral mucous membrane and small cells may arise and subside without any further trouble. This probably takes place in all acute middle ear inflammations, and accounts for the mastoid pain seen in the first twenty-four hours, and then disappearing.

(2) Free formation of pus, retention, destruction of bone may follow, and is simply a further stage.

In the first stage we temporize safely, while with the later we wait, at the patient's risk.

The type of mastoid has a bearing on the course the case runs. The small, hard sclerosed bone offers resistance, while the large diploeic type appeals to invite further rapid necrosis; clinically, however, the opposite may take place.

4. *Symptoms.*—The ordinary symptoms of mastoid involvement—discharge, pain on pressure, dipping of posterior superior wall and rise of temperature—are familiar to you all. In influenzal cases most all of these, even sometimes discharge may be absent. The symptoms may be most misleading and the case give great concern or very false security.

Temperature.—My experience is that high temperature does not give any indication either as to virulence of infection or amount of destruction of bone. It may, again, be the only symptom other than aural discharge one has to act upon, and if unaccounted for in any other way, and associated with slight mastoid pain or deep pressure, is of considerable value in determining early operation. Even when due to mastoid involvement it does not necessarily follow that opening the bone will immediately reduce the temperature. The toxaemia may be so severe that several days must elapse before the temperature falls. Marked variations of temperature and profound toxaemia in cases lasting a week or even less point to lateral sinus involvement, and demand *immediate* and *radical measures.* I consider a two-hour chart alone of value, a morning and evening temperature may be very deceiving.

Pain.—During the first couple of days of acute otitis media mastoid pain is frequently present. It is found at the tip and antrum, and if the case goes on will later be found more general and centralized over the mastoid antrum or tip only. Pain is of more significance in streptococcic infections. The canal may be very tender, especially at the upper and posterior wall near the membrane. I think this is more common in influenza cases than the sagging of the wall. Pressure pain on the mastoid is very deceptive, and may even be absent.

Discharge.—(1) Profuse discharge—greater in amount than can be secreted by the tympanic mucous membrane—indicates a source from a larger cavity, and the only place this could be would be the antrum of mastoid and cells. Cessation of discharge and increased pain or earache points either to a closure of the membrane or swelling closing the additis. As mentioned above, the tympanum may now clear up and the mastoid disease go on.

Sagging down of posterior superior wall practically always occurs but late; tenderness to pressure of cotton tip probe is of very great value, and appears quite early.

5. *When to Operate.*—This point is very difficult to decide. I think during epidemic influenza we are justified in operating very early because we find in so many cases, with little objective symptoms, very great bone destruction. We may operate early and find almost no pus, simply a very vacular bone, but we at once place the patient safe and comfortable, and he rapidly gets well. I believe exploratory incision is justified in occasional instances. When we consider that most of the main symptoms may be lacking, that great destruction of bone may take place with

little or no pain, I think we should very carefully consider the advisability of early operative measures: especially is this the case in streptococci infections with a condition of leucocytosis.

Treatment: Abortive.—Free and unobstructed drainage is the essential feature. If the case is seen before a perforation has taken place one should first sterilize the canal. The opening in the drum should be free and extend from the floor to the roof. One may quite properly extend the incision into the posterior superior wall if there is much congestion there. An anæsthetic may be necessary, gas or ethyl chloride, depending on the patient, but a solution of cocaine in analine oil and alcohol will answer very well. A small opening, badly situated for drainage, will require enlargement.

Local depletion of blood is of value. Leeches may be freely used early. Cold, in form of ice coils, has not been of any permanent value in my hands; it may greatly mask the course of the disease, as the external evidence of the disease may go away while the destructive process continues in the deeper cells. The cases in which cold over the mastoid has apparently been of value are not cases of pus in the bone. The exudation is not yet purulent, but rapidly becomes so, and cold may retard this, and if used early enough not only will delay pain, but lessen the exudate, at any rate in the superficial cells. Rest in bed, free use of calomel and salines are essential points to carry out. Frequent and copious irrigations of the auditory canal with hot saline, hydray cyanide (1-5000), or similar preparation, greatly assist resolution and are very comforting to the patients. Strips of sterile gauze laid along the floor of the canal, and changed every hour or oftener, helps to keep the canal clean and assists the tympanum to get rid of the pus. Care must be taken that the gauze wick does not act as a plug, and if any doubt on this point occurs the wick had better be discontinued. Carbolic acid and glycerine used as ear drops are of value and give relief to pain. Frequent aspiration with a large Seigle speculum or Sondermanns or Mucks suction apparatus is of marked value in draining the middle ear rapidly. The condition of the naso-pharynx requires consideration, and I am sure the use of a strongly medicated vapor of oils and disinfectants thrown into the middle ear through the eustachian tube is of decided value. Care must be taken that there is free exit from the tympanum through the drum-head, and that the vapor is not irritating. I do not use powders in the ear at all in these cases, for the following reason: I can see no use in blowing powder over a membrane (the drum-head) which has nothing to do with the disease. The inflamma-

tion which we are attempting to allay is beyond this membrane, and is reached only through a small opening (the perforation). Even if a small particle of powder should go through the perforation, what good it might accomplish would be upset by the blocking up of the hole. Free exit of discharge from the tympanum is the main consideration in our treatment, and we do not assist nature in removing this exudation by making the discharge thicker and blocking up the point of exit.

Operative Treatment.—I have nothing to say except that I believe it should be *thorough,* and especially the cells in the zygoma and tip thoroughly opened up. If extensive destruction is found beyond areas of hard bone, one should consider the advisability of uncovering the sinus, as a peri-sinus abscess was found in several of my cases when the sinus was covered by apparently hard, healthy bone. Generally speaking, the antrum should be reached, but the additus not necessarily disturbed. In chronic cases which have undergone an acute infection, I think we might very well, with advantage to the patient, especially so far as the hearing is concerned, leave the tympanic cavity alone—the so-called Heath operation.

84 Carlton Street.

CONSERVATIVE SURGERY OF THE TUBES, WITH REPORT OF FIVE CASES.*

By L. W. Cockburn, M.D., Hamilton.

When watching a surgeon fish up and cut away ovaries and tubes for adhesions, thickening, cirrhosis or cystic degeneration, the thought has often occurred to me as to how the operator would relish having the corresponding organs in his own person so unceremoniously whipped off!

My leanings towards conservatism in these cases is the reason I am able to present brief notes of the five following instances of repair work done on diseased ovaries and tubes. With one exception, I have been able to keep all the cases under observation, and I am therefore able to speak from personal knowledge as to the subsequent course of each of the four cases I have been able to watch.

Case I.—Mrs. A. Consulted me October, 1898, for an abdominal tumour. Examination revealed an ovarian cyst on the left side about the size of an adult's head. Operation November 17, 1898, removal easy, few adhesions being encountered. After removal of the cyst, the right ovary was drawn up for inspection. It was in an undoubted state of cystic degeneration. It measured about 2½ inches in its longest diameter, and was proportionately enlarged in other directions.

I punctured the cysts, cut away their walls, and trimmed down the ovary as much as possible. Recovery uneventful.

This woman conceived, but I was obliged to stop the pregnancy on account of adhesions about the stump of the cyst on the left side tying down the uterus. For three or four years after the operation I examined this case about every six months to keep watch on the state of the right ovary. It never enlarged, gave no trouble; she menstruates regularly, and enjoys excellent health.

Case II.—Mrs. B. Diagnosis, double pyosalpinx following septic abortion. This woman was seriously ill. I advised immediate section, and asked for authority to act as I thought best in the patient's interest after the abdomen was opened and the exact condition revealed. This permission was refused, both the patient and her husband stipulating that nothing was to be removed.

I pointed out the danger of tying my hands in this way, but

*Read at a meeting of Ontario Medical Association.

both husband and wife persisted that there was to be no mutilation. Operation March 9, 1907. On opening abdomen uterus tubes and ovaries found buried in a mass of adhesions. Large pyosalpinx on the right side, complicated with appendicitis—appendix being firmly adherent to the pus tube. Left tube and ovary inflamed, adherent and enlarged.

Left to myself, I should have tied off the appendix at its junction with the caecum, and then removed appendix, uterus, tubes, and ovaries in one piece. My instructions, however, were too explicit.

I therefore freed the appendix from the pus tube and removed it. I then freed the left tube and ovary as much as possible, and finally drained the right pyosalpinx through the vagina.

This patient made an excellent recovery. I saw her nine months after the operation; she was in good health and menstruates regularly, and, what is more, she did not spare me!

Case III.—Mrs. B. consulted me for pain, irregular menstruation, and sterility following abortion. Anxious for children. Bimanual examination revealed uterus retroverted, bound down. Tubes enlarged, tender, and also bound down.

Operation Nov. 9, 1907. Adhesions very firm and extensive, severed principally by scissors. Severing of adhesions carried out systematically till the uterus, tubes, and ovaries were entirely free on both sides. Fimbricated ends of both tubes sealed. Tubes opened, contents gently squeezed out, and a large probe passed down each tube to the uterus. Parts returned and abdomen closed, about a pint of saline being poured into Douglas' pouch.

Recovery uneventful. This lady wrote me under date of January 18, 1908, saying her health is now perfect. Her home is in the Southern States; she was visiting friends in Brantford, and had not returned home when she wrote me. I hope to hear she has become pregnant.

Case IV.—Mrs. D. Married about 5 years. Miscarried about 12 months after marriage. Miscarriage followed by "inflammation," and has not felt well since. Menstruation regular, but painful. General pelvic uneasiness. Coitus painful. No sign of pregnancy for the last four years. Anxious for children. Bimanual examination. Uterus more or less bound down, mass about the size of a small orange felt on each side. Operation November 14, 1907. Adhesions extensive about the sexual organs, but not very dense, carefully separated throughout, principally by scissors. Tubes gently squeezed from uterus outwards, a large probe passed down each, the parts returned, and the abdomen closed. Recovery uneventful.

All pain and discomfort completely relieved. On returning home this lady became pregnant. She is now in excellent health, and expects her confinement next September.

Case V.—Mrs. E. Married about nine months. Highly neurotic, suffers severely from insomnia, and can with difficulty be prevented from taking drugs.

Little or no complaint made of pelvic symptoms, but was very anxious for children, and requested examination with that object in view.

Bimanual examination under ether revealed a fixed and retroverted uterus, while the tubes and ovaries on each side felt hard and not very mobile.

Operation March 26, 1908. Uterus very firmly adherent posteriorly. Adhesions severed and uterus raised. Very dense adhesions were encountered between the right ovary and tube and the pelvic wall. Adhesions cut close to ovary and tube. Adhesions on the right side slight and easily separated.

On raising the organs well up after freeing all adhesions the tubes and broad ligament were seen to be studded with small cheesy-looking deposits I believed to be tubercular. As many as possible were removed. The left tube was opened without much difficulty, and a probe passed along it.

The condition of the right tube was not so satisfactory.

Its fimbriated end had vanished, and in its place was a smooth, rounded knob. I cut this off, found the opening into the tube, and passed a probe along it. The probe was arrested about half way by what I believe was a deposit of tubercle. I could not tunnel the obstruction, and I did not think it wise to resect the diseased segment of tube. I therefore lightly suspended the uterus and closed the abdomen.

Recovery uneventful. The neurotic symptoms and insomnia have almost entirely disappeared.

There has not been time yet to test this patient's ability to conceive. The left tube is potent, and should serve her purpose. If it does not, and her wishes for maternity are sufficiently keen, I would not hesitate to reopen the abdomen and resect the blocked segment of the right tube.

Discussion by Dr. S. M. Hay on Conservative Surgery of the Tubes:

I wish to congratulate the reader of the paper on the excellent results obtained by his methods; however, I think that perhaps a more extended experience might not prove so successful.

I am glad that the paper included conservative surgery of the ovary as well as the tube, as much more can be done on the

ovary than on the tube, with much better results. The surgery of the pus tube has passed through three distinct stages. First, Tait and his followers removed both tube and ovary, making a common channel. This necessitated the leaving of a small proximal piece of tube. Some patients were not cured, and came back and had the uterus removed, and a cure resulted. The uterus was thought to be the offending organ, while in reality it was the stump of tube left behind. Next, the French surgeons, blaming the uterus, removing all the appendages, and many times part of them not diseased.

Then came the present method of opening the abdomen and resecting the pus tube out of the bone of the uterus and sewing up the V-shaped wound with catgut. I would no more think of leaving a piece of diseased tube at the uterine end, than I would of leaving a long stump of appendix on the bowel. True, the woman is sterile, with the tubes gone, so she was before the operation, but you have relieved pain and other symptoms.

We should leave some ovarian tissue wherever possible. Every woman has a right to have her menstrual function preserved to her during the child-bearing period where at all possible; she is better for it in every way. Diseased ovaries are more likely to restore themselves than are diseased tubes.

In badly diseased ovaries save some part of ovarian tissues.

In badly diseased tubes remove all the tube into the uterine tissue.

Discussion by Dr. T. Shaw Webster on Conservative Surgery of the Tubes:

Conservative surgery of the tubes and ovaries should be endeavored, and if it fails to cure, medical operation may then be done. By the vaginal route they can be done easily, and if pus presents good drainage will save the patient from danger of sepsis.

Salpingostomy should always be attempted, and will frequently give the desired result.

HYDROTHERAPY ON MENTAL AND NERVOUS DISEASES.*

By A. T. Hobbs, M.D.
Superintendent of Homewood Sanitarium, Guelph, Ont.

Winternitz, in his system of physiologic therapeutics, says: "Hydrotherapy is the systematic application of water at various temperatures and pressures, and in varying forms, to the surface of the body for dietetic, prophylactic and therapeutic purposes."

To properly carry out the principles of hydrotherapy as laid down by Winternitz it is necessary to have an apparatus whereby water may be applied at an exact dosage, that is, it must be capable of absolutely regulating temperature and pressure to suit the various conditions which we are called upon to treat, if we are to meet with success.

We are still in the embryonic stage at the Homewood, as far as hydriatic treatment is concerned, having only had a year's experience with the apparatus as designed by Simon Baruch, of New York City, but the results thus far obtained are very encouraging, and lead us to hope that much good may be done along the lines of hydrotherapy. I do not think that I can lay too much stress upon the fact that the treatment must be exact to be successful. Just as you give exact doses of drugs for certain conditions, so you give exact doses of water—you expect certain results to follow the dose of the drug—and you also expect certain results to follow your water dosage—therefore, I say, be exact.

The good effects of this system of treatment can easily be nullified in the hands of unskilled and unintelligent operators; furthermore, each patient is a law unto himself and demands close study by the physicians and the bath attendant. Subjective symptoms cannot be entirely ignored, and sometimes too strict adherence to a definite prescription may do more harm than good, and the bath attendant must learn by experience to recognize any error in the prescription. On the other hand, however, due care must be taken that the patient does not lead physician and operator astray by misleading statements to their own detriment.

The rationale of treatment in cases ranging from the mildest form of neurasthenia to the gravest form of melancholia generally resolves itself into a question of suitable diet and its

* Read at the Meeting of the Canadian Medical Association at Ottawa, June, 1908.

proper assimilation. I am well within the mark when I say that 80 per cent. of the mental and neurasthenic admissions to the Homewood present, in addition to their many symptoms, an emaciated appearance and a body weight much below par.

Any method of treatment that will improve assimilation in these neurotic and mental patients is a valuable adjunct to our armamentarium.

In hydrotherapy, scientifically applied, we have, without doubt, an aid to general treatment that will materially assist us in the recovery of our patients.

Time does not permit me to go extensively into the action of water on the various functions and organs of the body, but let me point out a few facts that can be easily demonstrated with the proper apparatus.

(*a*) *On the Circulation.*

Baruch says: "The circulatory system forms the great highway upon which the products for the maintenance and growth of the organism are conveyed, and by which the products of waste and repair incident to the performance of all functions are eliminated. It, therefore, follows that any agent which is capable of exercising the slightest influence upon an apparatus, which is destined for these important tasks, must be capable of exercising in disease an analogous influence upon the organs and their functions which come under the domain of its influence. These are some of the effects of water so applied:

Cold water applications cause rise of blood pressure.

Warm water applications cause fall of blood pressure.

Cold enhances the tone of the entire circulatory apparatus.

Warmth diminishes the tone of the entire circulatory apparatus.

(*b*) *On the Composition of Blood.*

After cold there is an increase of red and white blood corpuscles and hæmoglobin.

After hot air and steam baths a diminution, followed by moderate increase in robust people.

(*c*) *On Respiration.*

The greatest irritation of the respiratory centre is produced by a cold application on chest and abdomen; then follow deeper respiration and an increased consumption and a freer carbon dioxide elimination.

It must be noted, however, that after cold applications respiration is effected by the extent to which reaction ensues; if the latter is good then respiration becomes much deeper and more air is inspired into the lungs.

If mechanical influences be added to thermic, as in douches, the effect upon the respiratory centre is much more enhanced.

(*d*) *On Muscular System.*

The fatigue curve is much increased by cold, that is, the working capacity is much improved.

Warm baths, unaccompanied by mechanical effect, lower the working capacity. Combined with mechanical effect, warm baths increase working capacity, but not to the same extent as cold, or alternating hot and cold.

(*e*) *On Tissue Change.*

The influence of hydriatic procedures on circulation, respiration, composition of the blood and muscular action have been stated. If these effects are far-reaching in health, how much more marked must they be in disease. The quantity and quality of the blood in various organs and parts of the body are improved and controlled, and since functional activity is the chief agency in producing tissue change, and this activity is dependent upon the blood supply in the organs, we may, by influencing the latter, readily exercise a powerful effect upon the former. That thermic and mechanical irritation, applied by means of water upon the cutaneous surface, arouses cell activity and effects tissue change is a fact that is based upon substantial experimental data.

Accepting these conclusions as correct, as they are attested to by practical demonstration, we are then in possession of an important agent with which to treat successfully many forms of mental and nervous diseases met with, not only by the specialist, but by the general practitioner.

Our plan of treatment, to be more specific, has been as follows:

Neurasthenia.

In all bath treatment it is a fundamental principle that reaction must follow the application of cold water. Equally as important is it that no procedure should be prescribed which will in any way frighten a patient, or cause that patient to lose confidence in a method which is new to the large majority of them, therefore, in the treatment of neurasthenia I make it a practice to employ the milder measures at first and gradually work up to the highest degree of hydrotherapeutic treatment. For example: the patient is only sent to the bath three times a week for the first week, and if their reactive capacity is fair and they have grown accustomed to the procedures as ordered, they are sent daily. A general prescription reads as follows:

Hot air box to point of perspiration.

Circular douche, 100° to 90°—2 minutes—15 lbs.

Fan and jet douche to entire body, 90° to 80°—10 lbs.—1 minute.

Lower minimum temperature 2 degrees and increase pressure 2 lbs. each treatment until a temperature of 60° and a pressure of 30 lbs. is reached.

The above prescription is suitable for a female; male patients can be treated more actively, beginning with lower temperatures and higher pressures.

After the patient has become accustomed to the jet douche, the Scotch douche (alternating hot and cold) may be used with good results.

Usually a walk in the open air to the point of fatigue is ordered to follow the bath.

Melancholia.

The same treatment as outlined above. If it is impossible to place the patient in a hot box owing to some mental phase, I would suggest as a substitute the circular douche at 102° or 104° for two minutes before reducing to 90°, as it is important that the body be well warmed before any cold is applied.

In the melancholic the Scotch douche used freely all over the body markedly stimulates the circulation and imparts a sense of well-being substituting the depression; and also considerably lessens the lethargy, inclining the patient to greater activity. As the treatment progresses day by day, the periods of euphorbia lengthen and the depression decreases, until finally normal mental health is restored.

Following the bath a vigorous towelling is indicated, more particularly in cases where reaction is not marked. This is usually required in the early stages of treatment in the majority of cases.

In case of any difficulty with the patient refusing the douches the nurse steps into the bath and manipulates the patient and at the same time reassures him.

Dementia Praecox.

(*a*) *Hebephrenic Type.*

Some good has been obtained in these cases by the use of stimulating baths of various kinds. The patient should go to the bath daily, and the treatment should be the same as in neurasthenia and melancholia, and gradually be increased in strength. Circular, rain, jet and Scotch douches are indicated, with lowering of minimum temperature and increase of pressure each day until the highest point of efficiency is reached.

(*b*) *Catatonic Type.*

As above. Results not so encouraging.

Manic Depressive Insanities.

(*a*) *Manic Type.*

Control excitement by continuous bath, 100°—one-half to six hours, according to condition.

Hot or cold packs (cold preferred), continued until excitement subsides. If patient falls asleep, leave him in the pack until he wakens; in the meantime keep him well covered with additional blankets. On removing patient from the pack a half bath, 80° or 85°, should be quickly given, with active friction to restore tone of dilated blood vessels, and then return patient to bed. Pack repeated two or three times a day if necessary.

(*b*) *Depressive.*

The same as in melancholia.

Exhaustion Psychoses, or Exhaustion Following Acute Disease.

Half bath, or drip sheet, or affusions night and morning—temperature 80° to 85°—duration 3 to 5 minutes, followed by a vigorous towelling and patient returned to bed, and in serious cases the temperature may be reduced to 70°, or even 60°.

Baruch says: "Let not the fear of cold water deter anyone from resorting to cold affusions in these desperate cases. They are the hydriatic substitute for digitalis and alcohol." I can fully endorse this statement, as I have recently treated a serious case of exhaustion and collapse in this way, and I can assure you that the result has been most gratifying.

Alcoholism.

Prescription (daily):

Hot air box—140° to 185°—10 minutes.

Circular (Rain) douches, 100° to 60°—3 minutes—25 lbs.

Scotch douche, 100° to 60°—5 minutes—25 lbs.

Rain douche, 60°—30 seconds.

Hot air box may be omitted after first two weeks.

Morphinism—Cocainism.

For the unpleasant symptoms of pain and restlessness during and following the reduction of the drug, I know of nothing better than full tub bath—temperature 102° gradually increased to 110°—duration 15 minutes at least—may use this twice daily.

In our year's experience with general hydrotherapy most excellent results have been obtained in neurasthenics, melancholics, exhaustion psychoses, mania depressive insanity and alcoholics. In the other psychoses only fair results have been obtained.

Incidentally, it has been found that the use of the perineal douche—temperature 85°—pressure 25 lbs.—2 minutes—patient sitting or standing over it, has been useful in chronic constipation. This is only of recent date, but so far results are good. The jet douche—same pressure and temperature—applied to the abdomen is also useful in torpor of the bowels. Sitz bath in sexual neurasthenia—warm, gradually reduced to cold—5 to 10 minutes.

Much of the success of hydrotherapy at the Homewood is due to my first assistant, Dr. E. C. Barnes, who has been untiring in his efforts to place the treatment on a practical basis. In this he has been materially aided by the intelligent co-operation of the nursing staff. By means of lectures and practical demonstrations the nurses have been instructed in the physiology and anatomy of the skin and the various organs and functions of the body that are affected by hydriatic procedures, the effects of the various kinds of baths and the indications for their use, but, above all, they have been taught to be exact in all procedures, and have now learned to fully appreciate the necessity of this by the gratifying results that have been obtained.

Selected Articles.

THE DANGERS OF HYPERALIMENTATION OF THE TUBERCULOUS.

By Marcel Labee.
Physician to the Paris Hospitals.

The great majority of physicians hold that the *alpha* and *omega* of the treatment of tuberculosis are: fresh air and hyperalimentation. The principal of fresh air is universally accepted, but that of hyperalimentation is beginning to be adversely criticised. Yet it still represents the prevailing doctrine, if I am to judge from the answers given at the clinical examinations by the physicians of to-morrow, and from the type of overfed and obese phthisical persons which appears to constitute the ideal of many therapeutists, and if I consider the routine treatment in most sanatoriums at home and abroad.

The idea of hyperalimentation owes its inception to two very interesting observations. First, the good results obtained by Dr. Debove, who fed through the stomach tube anorexic, dyspeptic, tuberculous objects who could tolerate no food, and vomited everything they took. With two "meals" a day, consisting of milk, eggs and powdered meat, he managed to fatten subjects whose emaciation nothing had previously proved capable of arresting. It was but a step from this to the establishment of hyperalimentation by milk, eggs and powdered meat. Then came Professor Richet's experiments, who showed that feeding dogs on raw meat rendered them vastly more resistant to tuberculosis. It was thought allowable to argue from the dog to man, apparently oblivious of the fact that the dog is much more carnivorous than man, and that food capable of fortifying a carnivorous animal may kill a herbivorous animal, and prove very injurious to an omnivorous animal.

Simple, straightforward formulæ always carry great weight with both physicians and patients; consequently the conception of hyperalimentation was readily received, the object for the phthisical being to get fat, cost what it may.

In hospitals, sanatoria and in private practice all tuberculous patients were subjected to hyperalimentation, and many who had read about it put the plan in practice for themselves, so

that it is among practitioners and educated people that the system makes most victims.

Hyperalimentation has been a fertile source of sickness. But does it cure tuberculosis? Were that so, we might be prepared to condone many shortcomings in exchange for one great benefit. Unfortunately that is far from proven. We must be on our guard not to be misled by the fact that the tuberculous patient is putting on weight. As has been very aptly remarked by Darenberg, the tuberculous subject does not get well, because he puts on flesh, but recovers because he is able to put on flesh. The increase of weight is a sign of improvement, an element in the prognosis, not a factor in the cure. Even so, too much confidence must not be reposed therein. One meets with bacilli-ridden patients in whom the lesions continue to run their course, in spite of the fattening process, and cavities are met with even in the obese.

The damage due to hyperalimentation in the subjects of bacillosis—a euphemism for tuberculosis—has been proclaimed by many authorities, and it deserves to be made known to practitioners generally. The most frequent evil is gastro-intestinal disturbance as in the following case: M. P., an engineer, 34 years of age, had an attack of hemoptysis in 1900, with laryngitis and pulmonary tuberculosis. He was advised to live in the south, and to undergo a course of hyperalimentation. He obeyed, and indeed improved on the prescription. In addition to the ordinary regimen, he ate every day of his life twelve eggs, from twenty to twenty-four ounces of raw meat, together with two sherry glassfuls of cod-liver oil. In a very short time this regimen became insupportable, so that he gave it up every fortnight for a few days' rest. Under this treatment he pulled himself together and rapidly put on flesh, so that ere long he weighed over eleven stone.

In 1902 he had another attack of bronchitis, accompanied by marked weakness and loss of flesh. Again he tried hyperalimentation, and he recovered in four months. Since that time he has retained the habit of eating large quantities of meat.

In the beginning of 1907 his stomach began to give him trouble. He complained of epigastric pain, commencing four hours after lunch and lasting until dinner time. The pain sometimes came on at night so sharply as to wake him up. He suffered from constipation, and voided much mucus and fragments of membrane with the motions. There was no vomiting.

Later on he complained of a good deal of pain in the track of the ascending colon, with extreme tenderness to pressure. His

medical attendant suspected appendicitis, and the advisability of an operation was discussed. The urine was examined, and sugar was found to be occasionally present.

It was then that he came to consult me. The tongue was covered with a thin, yellowish-white fur, the mouth was bitter, and the breath fetid. The stomach was normal, the liver slightly enlarged. The urine when treated with nitric acid, gave a reddish-brown color. It should be mentioned that the pulmonary lesions appeared to be quite cured. I diagnosed gastro-enteritis, with hepatic congestion, caused by excessive meat diet. I directed the patient to have the urine analyzed more fully, under suitable conditions, and ordered him our usual trial regimen to be followed for three days. Some time after I was informed by letter that he felt so much better under the trial regimen, which had modified and regulated his alimentary habits, that he had not thought it necessary to come back.

In some instances the congestion of the liver is very pronounced, and is the first thing to attract attention, as in the following case: M. D. was suffering from pulmonary tuberculosis of the fibroid type, limited to the right apex. He was a large eater, and drank freely; in fact he overfed himself. He was dyspeptic, was suffering from diarrhea, and had been losing weight for some time past. An appropriate regimen brought about an immense improvement, the diarrhea ceased, and he put on fifteen pounds in a few months.

In the following year, feeling weak once again, he sought to recover his strength by systematic hyperalimentation. He took large quantities of meat at both meals, in addition to twelve ounces of raw meat daily. Thereupon he began to gain in weight, but digestion became troublesome. He complained of epigastric distention and suffocation, and from time to time he had attacks of diarrhea with matutinal nausea. I found that the abdomen was much distended; there was congestion of the liver, with a subicteric tinge, a furred tongue and a foul breath.

I dispensed with the raw meat, reduced the allowance of food, and gave him some alkaline powders. The diarrhea lasted for some time, there being two or three liquid stools every morning. He lost weight slightly. The state of the lungs remained unchanged. Within three months his condition had notably improved, but the intestine remained tender, especially in the right iliac fossa. Three years later he came to see me again. He had returned to the practice of eating and drinking too much, and he ate far too rapidly. He had gained in weight, but the morning waterbrash had returned, and he had two pasty motions daily.

The ingestion of excessive quantities of meat intensifies the fever of tuberculosis; indeed, in some cases it seems to be the sole cause of the fever. Here is an instance of the kind.

M. J., aet 16, developed bacillosis a year ago, with a rise of temperature. No definite lesion could be made out. For a year past he had been pale and weak, although he had continued his athletic training, especially boxing. His father, who felt anxious about him, brought him to me on January 21st, 1908. The young man had splendid muscles, but, in spite of his promising appearance, I found signs of commencing tuberculosis at the right apex, with dry crackling. I sent him to the Bligny Sanatorium for treatment.

The result was very satisfactory. On May 23rd he came back to see me, and I found that the pulmonary lesion had quite cleared up. In four months he had put on 16 pounds in weight. He had, however, from time to time, a rise of temperature, and I was struck by the furred state of the tongue, and the foul breath. The patient told me that at the beginning of his residence at the sanatorium he had had some diarrhea, and that digestion was somewhat labored and accompanied by hiccough. He related, further, that he had undergone excessive hyperalimentation; in fact, it was a sort of competition between him and his fellow-patients which should eat the most. At each meal he ate several big pieces of bread, several thick slices of meat, and of a morning, in addition to the sanatorium allowance, he took a whole box of sardines in oil. That was enough to explain his rapid gain in weight, his digestive disturbances, and his occasional febrile attacks.

The following is an even more typical observation. It serves to show to what excess the hyperalimentation may go when undertaken in good faith, reinforced by a strong will.

A young practitioner, at the termination of his resident appointments, was attacked by slight tuberculosis of one apex. He proceeded to rest himself, plus excessive hyperalimentation. He gained in weight, but very soon digestive disturbance and fever made their appearance. Anxious about himself, he consulted several physicians, who auscultated him, declared his pulmonary lesions to be cured, and advised him to go on with his rest and hyperalimentation. The fever and digestive disturbance persisted until one day, when, for the first time, a medical friend palpated his stomach and discovered a much enlarged liver. He placed him on a moderate lacto-vegetarian diet, on which he lost weight, and steadily improved, the fever disappeared, strength returned, and he was enabled to resume practice.

Dyspepsia, gastro-enteritis, hepatic congestion, and prolonged fever are the commonest accidents induced by hyperalimentation, but they are not the only ones.

Enteritis may be complicated by appendicitis, as in P. and A. It may be, as Lucas Championniere suggests, that excessive meat eating is responsible for a certain number of cases of appendicitis.

Various forms of dyspepsia may be caused by the regimen upon which the tuberculous are placed. Sometimes it is of the nature of gastric hypersecretion, with hyperchlorhydria due to the strain thrown upon the digestive glands; sometimes, on the other hand, we get gastric atony, with hyperacidity due to secondary fermentations. Mouisset states that neurasthenia may be induced by this alimentary intoxication.

The kidney may suffer, and we may get albuminuria, with symptoms of nephritis, caused, or at any rate aggravated, by the abuse of meat (Robin). At the Climato-Therapeutic Congress at Cannes in 1907, Dr. Bourcart related a number of cases of uremia supervening on excessive raw meat diet; and Renon relates the case of a fellow-practitioner, aet. 55, who succumbed to an attack of uremia after a course of intensive zomotherapy prescribed for fibroid phthisis. Ognatowski's experiments and the still pending experiments which I have undertaken with the assistance of Dr. Thaon on feeding herbivorous animals on meat, clearly show that one of the principal effects of a meat diet is damage to the kidneys and albuminuria.

At a later period hyperalimentation is responsible for disturbances of nutrition, such as biliary lithiasis, urinary lithiasis, obesity, gout and diabetes.

The abuse of a meat diet and the auto-intoxication thus caused may determine cutaneous eruptions, such as acne, eczema, urticaria, furunculosis, etc.

It may indeed aggravate the respiratory symptoms by setting up attacks of bronchial and pulmonary congestion, asthma, and hemoptysis (Petit). Sabourin has demonstrated the influence of hyperalimentation on the production of hemoptysis in certain tuberculous subjects with diseased livers.

Dr. Chauffard has witnessed the supervention of renal lithiasis following hyperalimentation, and Professor Robin, in a patient who took large quantities of raw meat, eggs, and ham, found an increase in the excretion of uric acid amounting to 40 grs. a day, followed by pyelitis, the inflammation of the urinary tract only ceasing when the hyperalimentation was discontinued. Dr. Mousseaux reports several cases of tuberculosis, in which,

after improvement had followed a course of hyperalimentation, the patients were obliged to go to Contrexeville in consequence of attacks of renal colic, with the expulsion of gravel or calculi. Demons and Poussin report cases of young subjects confined to bed on account of coxalgia, etc., who developed renal lithiasis after hyperalimentation.

Lastly, Sabourin points out how difficult it is to effect a cure in tuberculous occurring in obese persons or persons who readily put on flesh, and shows the advantage that attends a regimen calculated to moderate nutrition in tuberculous subjects whose external health is too exuberant.

To sum up, excessive nourishment, especially in the shape of meat, is apt to give rise to a whole series of disturbances—some mild, some grave, some early, some late. The practitioner should be on the look-out for these, so as to combat them at the onset.—*Medical Press and Circular.*

RELIEF OF RETENTION OF URINE BY SUPRAPUBIC CATHETER.*

W. T. Belfield, M.D., Chicago.

The physician occasionally finds a patient suffering from complete retention of urine, which cannot be relieved through the natural channel, usually because of false passages that have been made in endeavors to pass a tight stricture or hypertrophied prostate. When satisfied by a patient trial that his efforts to pass a catheter through the urethra must be futile, the physician must make an artificial exit for the urine. How shall this be done with the least detriment to the patient?

Our text-books advise (1) suprapublic aspiration, repeated if necessary; if the patient still fails to void urine naturally, (2) a cutting operation, perineal or suprapubic.

The objection to repeated aspirations which honeycomb the suprapubic tissue, is sufficiently obvious; and the difficulties and dangers of perineal urethrotomy without a guide are well known to all who have performed it.

For many years I have done neither, but have employed a measure which is as little dangerous to the patient, and as easy

* Clinical lecture at Rush Medical College.

for the physician as is aspiration, and yet solves the problem completely. I have never seen this simple procedure described in our text-books; yet it is probable that others have used and described a device that so easily relieves the patient from the distress and danger, and the physician from the perplexities of a serious situation.

This patient whom I now present is one of many illustrations of the value of this measure. Seven days ago he sought my aid for relief from the agonies of complete retention of urine that had existed thirty-six hours. The cause was a tight stricture of the bulbous urethra; and false passages already made defeated a patient effort to enter the bladder.

Without anesthesia, a trocar and canula No. 14, French scale, was passed into the bladder in the median line about an inch above the symphysis. The trocar being withdrawn, a soft catheter, No. 8 French, was passed through the canula far enough to carry its end to the bottom of the bladder. The canula was then withdrawn, leaving the catheter in its place. The catheter was attached to the skin by adhesive plaster; and after the urine had escaped the free end of the catheter was tied in a knot to prevent dribbling. The patient, who was allowed to be out of bed, was instructed to untie the knot every five to six hours, void urine through the catheter, and then retie the knot. Urotropin was given internally.

For five days no attempt was made to pass the stricture, although during the last two of these days some urine trickled out of the meatus when the patient urinated through the catheter. During these five days the false passages in the urethra were healing, and the edema of the bladder-neck and prostate was subsiding. Two days ago a cautious attempt to pass a Banks' bougie was successful, and the stricture was immediately dilated to 21 French. As the urethra was now open, the suprapubic catheter was withdrawn, and its track left to heal spontaneously. The patient states that since the withdrawal of the catheter no urine has escaped through the puncture, which, as you see, is scabbed over and dry. It always heals when the obstructions in the natural channel are removed.

Sometimes one fails to enter the bladder through the urethra after four or five days' rest; in this case the suprapubic catheter may be left in position two or three days longer. Should the urethra still be found impassable (which in my experience has never happened), a cutting operation may then be considered, the patient being in far better condition to stand it because of the week's rest of the bladder. Should still further delay be

considered best, the catheter should be removed, cleansed of the adherent urinary salts, and reinserted; the track into the bladder will remain patulous for a short time.

Should the obstruction be an enlarged prostate, and prostatectomy be considered unwise, the patient may wear the suprapubic catheter for an indefinite time, withdrawing it every day or two for cleansing. Patients easily learn to remove and reinsert the catheter through the fistula; one elderly patient of mine wore the catheter in this way for six years. Another, who had a cancer of the prostate that prevented urination, secured entire freedom from urinary troubles during the last nine months of his life through this device.

Other conditions in which the suprapubic catheter is useful are sometimes met, such as severe prostatic suppuration.

In case the physician decides to make perineal section for an impassable stricture, a small curved trocar and canula can be passed into the bladder above the symphysis, and a filiform passed through the canula into the deep urethra as a guide; indeed, one is sometimes fortunate enough to pass the filiform through the stricture from behind, when it cannot be made to pass from in front.—*The Medical Fortnightly.*

TECHNIQUE OF OPERATION FOR PRIMARY LACERATIONS OF THE PERINEUM.

By Dr. Robert W. Stewart.

The gradual descent of a normal fetal head through a normal pelvis should not cause solutions of continuity in the soft parts, but narrowing of the bony parts of the pelvis and consequent pressure upon as well as stretching of these soft parts; the existence of old cicatrices in vagina or vulva, with the loss of elasticity; disproportion between fetal head and the canal through which it must be driven; the too rapid descent of the head; the failure of the head to flex at the perineum, and the consequent presentation of one of the greater diameters; the too rapid anterior rotation of the head in occipito-posterior positions; its failure to rotate completely, or, worse still, posterior rotations of the occiput—are all frequently met with, are all

* Read at meeting of Obstetrical Society, of Cincinnati.

deviations from the normal, and are all capable of producing more or less severe lacerations. Where instruments are used or other manipulations employed, the danger of producing tears is greatly increased. In short, it may be affirmed that but few women escape at least the slighter tears, and many suffer grievously from them, and the obstetrician is not always to blame. This affirmation is made in spite of the opinions of some obstetrical authorities. If it were not true, the gynecologist would have less work to do, at least in the way of plastic operations. Consequently, a very careful examination of the soft parts should be made immediately after the delivery of the child, in the interim between that and the expulsion of the placenta. This is easy of accomplishment, because the tissues are all distended and open to inspection.

By separating the parts the larger lacerations are easily seen, but in order to avoid mistakes, the surfaces should be rubbed clean of blood with gauze sponges dipped in a solution of bichlorid of mercury (1.2,000) or lysol (1 per cent.); then by inserting the finger into the rectum and putting the vaginal tissues upon the stretch a complete view of the parts can be obtained. The result will be to show not only superficial tears, but the deeper and more important ones. To make this examination, the patient should be put upon her back and a strong light brought to bear upon the parts. The thighs should, of course, be flexed upon the abdomen.

The degree of laceration should determine the subsequent procedures, for it is still a mooted question as to whether the purely superficial separation should be interfered with or not, for the good reason that most superficial tears will heal of themselves, and there is always a possibility of adding to the possibility of infection by adding stitch-holes to the already lacerated tissues. Per contra, it may be said that in this day of thorough asepsis the latter danger should not be a very great one. The rule should be that when the structures below the epithelium have been invaded it is safer to close the wound, especially those in the vagina, because stitching them does not give much pain. Where, however, the deeper structures are seriously wounded, and particularly where there can be no reasonable hope that the parts will be restored to their normal conditions by the natural process of healing, resort must be had to repair, the extent of which will necessarily depend upon the amount of damage which has been done. For those superficial wounds, those which go just below the skin or mucous membrane, a stitch or two will cause perfect closure; for those which involve fascia or muscle, the apposition

of the edges should be made with all the care that one would exercise in bringing together the edges of any incised wound. It is of the utmost importance to make this coaptation particularly complete in the upper ends of the long tears, for thus the burrowing of the lochial discharge is prevented. Whenever the writer has been careless in these respects he has been chagrined at the poor results obtained. In his judgment, there are two factors which tend to produce bad results in the hands of even skilful obstetricians—failure to cleanse the wounds of blood and possible disease germs, and failure to bring the edges of wounds accurately together. In the hands of the incompetent or the careless, the opportunities for having bad results are practically too numerous to deserve mention.

In very superficial tears the sutures should be made with chromicized catgut (ten-day), and may be running or interrupted. In the deeper wounds they should always be interrupted, for the simple reason that breaking of any part of a running suture lets down the whole structure, while the breaking of one interrupted suture does not invalidate the integrity of the whole, but only of a very small part. Another reason for preferring the interrupted sutures is that there is less danger of damage from the nozzle of the syringe in the hands of careless or incompetent nurses. In this connection it may be permitted to say that more than once the writer has viewed with alarm and indignation vaginal stitching that has undoubtedly been plowed up by a strenuous or careless nurse.

Inasmuch as the vaginal tissues have not only been torn, but also distended and driven forward by the descending part of the fetus, the sutures—the alternate ones, at any rate—should be inserted a quarter of an inch from the torn margin, pointed downwards or towards the vulva, brought out at the bottom of the wound, re-entered at this point, and brought out again opposite the point of entrance on the other side. The object of this procedure is to draw the tisues more nearly into their normal position, and thus to insure more perfect coaptation and union. The stitches alternate to these may be drawn across the wound from side to side, and including the bottom of the wound. Thus the wounds are closed down to the perineum, and frequently nothing else is necessary, for the integrity of the parts may be thus so completely restored as to necessitate at most a superficial stitch or two to bring the edges of the skin together. When, however, the tear is down to the muscle or into it, the perineum must be restored by passing sutures, preferably of silkworm-gut, from side to side, entering just outside the torn margin, then passing

deeply into the so-called body of the perineum in order to get a good purchase, and thence to the other side and out upon the skin at a point opposite to that of entrance.

In those cases in which the tear is complete, the rectal edges of the wound should be brought together before putting in the perineal sutures. This is best done by entering the needle high up near the angle of the tear and just above the rectal mucous membrane, pass the needle at an acute angle to line of laceration to the extent of a quarter of an inch at least, and deeply enough to get a firm hold upon the tissue; bring the needle out at the point indicated and thence across to a point a quarter of an inch beyond the opposite line of tear and at a height which corresponds to that of exit, thence deeply through the tissues to a point just above the mucous membrane and opposite to that of original entrance. Tie each suture when completed, leaving the knot in the rectum. This is to be continued until the rectum has been restored, and then the perineal sutures should be placed.

After the work has been done as far as has been indicated, the parts should be practically in the normal position, and as far as sutures can put them the integrity of the parts should be restored. It may be necessary to put an occasional additional suture into the vagina to bring the torn edges more completely together, but if the work has been carefully done not many such stitches will be needed.

After catheterization and a vaginal douche of lysol solution (1 per cent.), the parts should be covered with aristol or some other antiseptic powder, an occlusion pad applied and held in place by means of a T-bandage.

If the stitches have been accurately applied there will be no necessity for frequent douching; indeed, the less frequently it is done the better, for the reason that if the lochial flow has not been contaminated there is no danger of sepsis from that source, and if it has been contaminated no amount of vaginal douching will do any good.

There remains but one question to discuss—how soon should the perineum be repaired? The answer would appear to be, immediately, for by so doing the danger from sepsis is materially lessened. At the same time so many contingencies may arise to make immediate operation inadvisable that the work must be postponed. Postponement for twenty-four or even thirty-six hours makes no appreciable difference in the healing process, but, of course, it does make a great difference in the danger of infection.

Editorials

ST. LUKE AS A PHYSICIAN.

It is generally understood that St. Luke was a very learned and skilful physician. One of the most pleasing references to this great physician may be found in a sermon by the Rev. Arthur B. Conger, Rector of the Memorial Church of the Good Shepherd, Rosemont, Pa., on St. Luke's Day, October 18, 1908, and published in the *New York Medical Journal*, November 15th. It is probable that St. Luke was a freed-man, or one of the Libertini, born in Lucania, in Southern Italy. He completed his medical studies at the great school of Tarsus, where he met St. Paul and "learned Christ." His writings in the New Testament, especially his original writings in Greek, showed that he was highly educated in the broadest sense of the words. He was designated by St. Paul as "the beloved physician." We know that St. Luke and St. Paul saw much of each other, especially at times when the latter suffered great physical pain. When St. Paul and St. Luke met at Troas, it was after the former had been detained in Galatea "by the infirmity of his flesh." Again, when they met on the road to Jerusalem, St. Paul had had "the sentence of death in himself," and supposed he was dying; but the ministrations of St. Luke were given with great care and zeal, and were attended by such excellent results that the great apostle Paul was able to continue his good work for many years thereafter.

After referring to some of the incidents of St. Luke's life, the rector spoke as follows about members of the medical profession and their co-adjutors, the trained nurses: "Now, here, if you will permit me, I wish to find the fundamental relation of the priest to the physician. It is personal. It is founded upon appreciation of gifts and culture, of fidelity to duty, which, when necessary, is so self-sacrificing as to border upon, if it does not often reach, the heroic. If I may be pardoned for momentarily giving this sermon a personal note, I should like to grasp

the opportunity to say that in my experience I have found no class of men who had the brains, knowledge, culture, and conscientious devotion to what appeared to them to be their duty, exhibited by physicians. And I should like to say a word for their most able co-adjutors, the trained nurses. They differ, of course, like every other class taken from our imperfect humanity. But, on the whole, I do not believe that any other vocation develops in women equal sagacity, skill, and delicate manifestation of tact and sympathy. And, while there are probably those who fail to appreciate them, I think they have the regard and in many cases real affection of the great majority of their worthy patients."

THE PRIEST AND THE PHYSICIAN.

In this article we shall consider the priest as one who acts as a mediator between man and the Divine Ruler, without any references to churches or denominations, but having in mind the fact that in the New Testament Christ is designated as a Priest.

In the sermon referred to in the previous article, the Rev. Mr. Conger took as his text the following: "Give place to the physician, for the Lord hath created him; let him not go from thee for thou hast need of him. There is a time when in their hands there is good success. For they also shall pray unto the Lord that he would prosper that which they gave for ease and remedy to prolong life." Ecc, xxviii. 12-14.

The rector urged strongly a more cordial relationship between the physician and the priest. He said: "Please do not leave word that we be excluded from the sick-room; it may be that some priests have not every gift of delicacy and tact, but might not the same be said of some physicians? I think you will find in all but exceptional cases, typhoid fever for instance, that religious people physically benefit by our visits, and in a large percentage also of those whose spiritual life may gain its first serious impulse through the chastisement of illness, wisely directed by the experienced priest."

In an editorial in the same issue of the *New York Medical Journal* we are told that Mr. John Brooks Leavitt, one of the wardens of St. Mark's Church, published a letter in the *New York Times*, November 9, in which he stated that "the medical profession and the clergy have drifted into such antagonism that doctor and parson too often glare at each other over the dying bedside, each regarding the other as an intruder, the clergyman thinking the doctor to be godless, and the latter looking on the former as a simpleton."

That a statement like this should appear in a paper such as the *New York Times*, and that it should come from a warden of an Episcopalian Church is simply astounding. Who and what are we, as physicians, that we should ever presume to stand between a dying patient and one of God's priests? We are glad to be able to say that we know of no antagonism between physicians and priests in this country which would go so far as to prevent both from ministering to a dying man. There may be some difference of opinion as to the advisability of allowing a priest to visit a patient when life is not endangered; but we hope there are very few in our profession who try in any way to prevent the visits of the patient's priest or pastor, providing the latter shows an inclination to be reasonable, as he generally does, according to our experience.

We quite agree with the final sentence in the editorial under consideration: "It is surely true that co-operation rather than repulsion is manifested whenever the priest and the doctor meet at the bedside of the sick. And so may it ever be."

BANQUET TO DR. GEIKIE IN DETROIT.

The "Old Boys" of Trinity Medical College, Toronto, and a certain number of graduates from other medical institutions resident in Detroit and Windsor, tendered to Dr. Walter B. Geikie, the well-known Dean of Trinity until June, 1903, and for several weeks after the last session of the college had ended, a banquet at the Cadillac, Detroit, October 17th, 1908, under the

chairmanship of Dr. Hislop, of Detroit. Interesting and kind speeches were delivered by Drs. Samson and Casgrain, of Windsor, and Drs. Knill, Palmer, Lennox, and others of Detroit.

Dr. Hislop, in proposing the health of their guest, said: "I feel it a great honor to preside at a banquet given in honor of so eminent a guest. It gives me great pleasure to find so hearty a response from the Canadian graduates of Detroit and Windsor who are assembled here to-night to meet the grand old Dean who has been justly termed the Dean of the medical profession of Ontario. We are glad to know that, in recognition of his long and faithful services to education in Ontario, our guest was honored last year by Queen's University conferring upon him the degree of LL.D." He concluded by saying: "Dr. Geikie, it affords me great pleasure indeed to have you present here at this banquet of the Canadian graduates as our deservedly honored guest."

Dr. Geikie, the founder of Trinity Medical College, in replying, spoke with much earnestness and affection about the career of his college, especially emphasizing the grand work she had done for so many years in the cause of medical education without any cost to the Province, and he expressed his deep sense of the very great injury done to practical medical education in Toronto by her destruction in 1903. He said this injury was so great that it will take years and much hard work to undo its disastrous results, and that it is being increasingly deplored by every true friend of practical medical education all over Canada and wherever the widespread reputation of this famous college had gone.

In Toronto, for more than fifty years prior to 1903, when students of medicine were much fewer than they are now, there were two medical colleges. They both did excellent work, which was much the better for the stimulus of healthy competition, ever an indispensable aid to full success. Long ago it was well and truthfully said that monopoly in educational, as in all other work, is the grave of excellence, and that nothing more certainly encourages negligence and ignorance. It is never desirable to have a number of students attending any one college so large as to make it impossible to take an individual interest in them. It

is equally undesirable that the faculty of any one medical college should be so large as to make it practically unworkable. This necessitates the subdivision of all large subjects into several small parts so as to give an insignificant portion only, to each of the many teachers. Under such circumstances neither teachers nor students can be interested in their work as they should be. Without this interest, enthusiasm is impossible, nor can many of the students so taught pass their examination creditably, or become as efficient physicians and surgeons as the public have a right to expect all Canadian medical graduates to be. Those students who pass well under disadvantages so great deserve the utmost credit.

A special feature of the banquet was the presence of Mr. Harold Jarvis, formerly of Toronto, the well-known tenor, whose splendid singing was highly appreciated.

ANAPHYLAXIS.

The dreadfully sudden deaths that have occurred immediately after the administration of antitoxin, especially in those who are subject to asthma, has led to a great deal of experimental work, with some therapeutic result. We now understand that these unfortunate individuals are highly sensitive to some constituent of the horse serum, probably the proteid content. Perhaps, too, the unpleasant symptoms that occur in some persons after eating mussels, honey, eggs, raspberries, etc., are due to the same kind of susceptibility. The fault in every case lies not in the serum or the article of food, but in the individual. To this peculiar phenomenon the term anaphylaxis has been applied.

We now know that many, if not all, of these sudden deaths were due to the fact that the serum was introduced into a vein. Many patients have been very sick after the administration of diphtheria antitoxin, have developed urticaria, but they usually recover in a few days. When, however, the for-

eign proteid of the serum is introduced into the blood-stream the individual is overcome in short order.

The practical application of this knowledge is to use the greatest precaution in administering any serum. Select a portion of the body where there is no large vein. If the patient has suffered from asthma, urticaria, angioneurotic œdema, or other allied neurosis, give only a portion of the dose at first. It has been shown that all the unpleasant symptoms will develop from a small dose, but, of course, not so acutely as from a large dose. After waiting an hour, the rest of the tube may be injected with perfect safety, provided the patient has not been affected.

It is interesting, too, in this connection to note that Rosenau and Anderson (Hygienic Laboratory Bull., No. 45) have some experimental evidence to prove that puerperal eclampsia is a form of anaphylaxis. They sensitized female guinea-pigs by injecting extracts of their own placentas. A little later, the same extract produced convulsions and other toxic symptoms. The experimenters found that it required what may be called an incubation period of seven days before the anaphylaxis developed, and that when once sensitized, the animals remained so for a long period, two years in a guinea-pig. We await with great expectation the results of some further observations they are now making. F. A. C.

THE DEANSHIP OF THE MEDICAL FACULTY.

Dr. R. A. Reeve's resignation of the position of Dean of the Medical Faculty of the University has been accepted. In our last issue we expressed our own opinion, and probably the opinion of the University world, respecting the admirable work accomplished by Dean Reeve during his term of office. Dr. Reeve has issued the following letter to the members of the Medical Faculty:

"*Dear Doctor*,—I desire to sincerely thank the members of the Medical Faculty for the courtesy and consideration extended to me while Dean, and to bespeak for my successor the continuance

of that sympathy and support which were so helpful during my twelve years' tenure of office. Yours faithfully."

(Signed) "RICHARD A. REEVE."

After the last meeting of the Board of Governors of the University of Toronto the following announcement was given to the press: Dr. C. K. Clarke, of the Toronto Hospital for the Insane, was appointed Dean of the Medical Faculty of Toronto University, to succeed Dr. R. A. Reeve, whose resignation was accepted. Fitting reference was made to Dean Reeve's services. Dr. Clarke, in addition to his duties as Superintendent of the Asylum, is also conducting psychiatric researches on a large scale with the co-operation of medical men at other asylums. It is understood that it is the intention of the Government to appoint him as head of the psychiatric wing in connection with the new General Hospital scheme.

Dr. Clarke received his medical education in Toronto. During his student days he did a certain amount of work in the Hospital for Insane under the guidance of that distinguished alienist, the late Dr. Workman. He became a member of the College of Physicians and Surgeons of Ontario in 1887, and graduated from the University of Toronto M.B. in 1878 and M.D. in 1879. For many years he was Superintendent for the Hospital for Insane, Kingston, and was removed to Toronto about two years ago.

The excellence of his work while in Kingston has been generally recognized in all parts of the continent, and Queen's University honored him by conferring upon him the degree of LL.D.

Dr. Clarke is possessed of culture, literary talent, ability of various sorts, together with pleasant manners and a charming modesty which is seldom seen in this strenuous age on this continent. We believe the appointment is eminently satisfactory in all respects.

BIRTHDAY HONORS IN GREAT BRITAIN.

On the last King's Birthday the following members of the profession were honored: Sir Alexander Critchet, the eminent surgeon oculist, was made a Baronet; Sir Donald McAlister,

Principal and Vice-Chancellor of the University of Glasgow, was made a Knight Commander of the Bath. Mr. Jonathan Hutchison, the well-known surgeon, received the honor of knighthood.

In this connection we find a letter in the *British Medical Journal* from Mr. Garry Simpson, of London, who writes as follows: "Has not the time arrived for the members of the medical profession to show in some tangible form their appreciation of the valuable services rendered to medicine and surgery by Sir Jonathan Hutchison? I am convinced that if a representative committee be formed and a fund opened, nearly every practitioner would be only too pleased to subscribe to some tribute of his great work."

ONTARIO MEDICAL ASSOCIATION.

The next annual meeting of the Ontario Medical Association will be held in Toronto on June 1st, 2nd and 3rd, 1909. The following officers were elected last year to look after the interests of the Association at the coming meeting:

President.—Dr. H. J. Hamilton, Toronto.

Vice-Presidents.—Dr. R. R. Wallace, Hamilton; Dr. A. Dalton Smith, Mitchell; Dr. A. M. McFaul, Collingwood; Dr. George Field, Cobourg.

General Secretary.—Dr. E. Stanley Ryerson, 243 College Street, Toronto.

Assistant Secretaries.—Dr. Samuel Johnston, 169 Carlton Street, Toronto; Dr. J. E. Davey, 145 King Street, Hamilton.

Treasurer.—Dr. J. Heurner Mullin, 201 James Street South, Hamilton.

Chairman Committee on Papers and Business.—Dr. Herbert Bruce, 64 Bloor St. East, Toronto.

Chairman Committee on Arrangements.—Dr. Bruce L. Riordan, 73 Simcoe Street, Toronto.

The Committee again decided to adopt the system of dividing up into sections, of which the following is a list, with their officers:

Surgery.—President, Dr. G. A. Bingham; Secretary, Dr. A. B. Wright.

Medicine.—President, Dr. W. H. B. Aikins; Secretary, Dr. F. A. Clarkson.

Gynecology, Obstetrics, and Diseases of Children.—President, Dr. Adam Wright; Secretary, Dr. J. A. Kinnear.

Eye, Ear, Throat and Nose.—President, Dr. D. J. G. Wishart; Secretary, Dr. Colin Campbell.

Preventive Medicine.—President, Dr. Sheard; Secretary, Dr. C. J. Hodgetts.

General sessions will be held in the afternoons and on one evening, the sections of Surgery, Obstetrics and Medicine meeting every morning and one of the special sections on each morning.

The Committee on Papers and Business have been successful in securing promises of papers from the following gentlemen: Dr. John B. Deaver, Philadelphia; Dr. E. F. Cushing, Cleveland, on "Copious Water-drinking in Typhoid Fever"; Dr. W. P. Manton, Detroit; Dr. Little, Montreal; Dr. C. H. Vrooman, Winnipeg; Dr. A. Baines, Toronto; Dr. McFaul, Collingwood; Dr. J. Morris Slemons, Baltimore; Dr. Ellice McDonald, New York; Dr. J. M. Elder, Montreal; Dr. J. M. Rogers, Ingersoll; Dr. Hadley Williams, London; Dr. H. B. Anderson, Dr. W. McKeown, Dr. Dwyer and Dr. C. B. Shuttleworth, Toronto; Dr. E. Ryan, Kingston; Dr. A. E. MacColl, Belleville; Dr. W. Spankie, Wolfe Island.

In order to get in closer touch with the various city and county medical societies throughout the Province, a motion was passed making the presidents of these societies corresponding members of the Committee. As some difficulty has been encountered in securing their names, the Secretary will be much obliged if the gentlemen occupying this position will send him their names and addresses. They will be kept informed from time to time of the work done by the Committee.

ONTARIO MEDICAL COUNCIL.

A special meeting of the Ontario Medical Council was held November 17th to 20th to consider the revision of examination tests and other important matters pertaining to the medical profession in the Province. The President of the Council, Dr. Glasgow, who opened the session, remarked that during the last seventeen years there had been a great many changes, and it was time for a revision of the curriculum for examinations. It was now generally acknowledged that the matriculation examination was not sufficiently high. The profession in Ontario should set a particularly high standard, but for some years past the matriculation examination had been a reproach. Another very important matter was that of interprovincial reciprocity.

Dr. Ryan, Superintendent of Rockwood Asylum, Kingston, outlined the most important changes advocated in the examinations by the Education Committee of the Council. A very important provision in the recommendations of the committee was that of raising the standard of matriculation practically 25 per cent. In chemistry the committee were recommending that the course as given by the various universities should be adopted and that two years in chemistry and the passing of two examinations should be demanded. Dr. Ryan did not favor reciprocity with Great Britain or European centres where conditions were fixed and the professions crowded, but he did believe that reciprocity with the great West would be of vast advantage to all graduates. It was quite impossible in the smaller centres of population to have such hospital or clinical advantages as were to be found in the Eastern colleges. It was also provided in the report that a student failing to pass in one-third of the subjects should not be allowed to try again till the next year. Alluding to the raising of the matriculation standard, Dr. Ryan remarked that if the higher percentage now asked for by the Council had been exacted in the recent examinations 25 per cent. of the students would not have graduated.

The Council proceeded to discuss the report clause by clause. In the course of an animated debate, Dr. Britton, of Toronto, said he believed they might easily go too far. Many men of lowly birth who were a credit to the medical profession would still be holding the plough if they had been required to pass the senior matriculation examination. And thus, eminent men as they were now acknowledged to be, they would have been lost to what he might call their closed circle.

Dr. Henry, of Orangeville, said they had heard threats of that nature for the last twenty years. He thought it must come from other than Government quarters, as the Legislature was interested only in raising the standard.

A letter from Dr. Parsons, of Coe Hill, asked for his reinstatement. Dr. Glasgow explained that the writer had been struck off the list for unprofessional conduct. It was referred to the Registration Committee.

On Dr. King's suggestion, supported by Sir James Grant, it was decided to add a two months' course in electricity and X-rays to the curriculum recommended by the Council. Dr. King said there was no department in Toronto where students could learn the use of electricity in medicine, and as it was no longer a fad, but a serious problem, he thought all students should be acquainted with it.

Sir James Grant said that several departments of electricity had been established in London, and if they were to keep pace with the times they must keep the students posted in the use of it in their profession.

The Discipline Committee presented the following report:

"Your committee ordered to inquire into the conduct of E. M. Cook, Esq. M.D., and D. Webster Shier, Esq., M.D., beg respectfully to submit the following report to your Council: 'Your committee met and consulted with Mr. J. W. Curry, K.C., counsel for the Discipline Committee, and instructed him to prepare the necessary notices and cause them to be served upon Drs. Cook and Shier. We beg to report that upon the necessary notices being prepared and an attempt having been made to serve same, it was found that Dr. E. M. Cook was not capable of being served, and instructions were asked for with reference to continuing the prosecution against Dr. D. Webster Shier alone at the present time. Your committee considered the question and concluded it was advisable to not proceed against Dr. Shier alone, but to delay proceedings with the hope that Dr. Cook could be served. Your committee respectfully forward the above report and ask that the matter be referred back to them for further action.' "

The report of the Education Committee contained a clause that a fifth-year student should spend part of that year either as a house surgeon in a hospital or as assistant to a regular practitioner.

The Text-book Committee reported that certain books be stricken from the list and others added. This was adopted.

Dr. Jarvis thought that more instruction should be given in diseases of children. After some discussion it was decided to lengthen the course in this subject in the intermediate year.

Several students who had failed on one subject in their final examination by a very small margin, and showed up well in other subjects, were admitted by the report of the Committee on Complaints, which was read by Dr. Ryan, and sanctioned by the entire Council.

Efforts will be made in future to restrict examiners from asking students "catchy" questions. The results last year were serious, it was pointed out, and a student should not be asked anything outside his text-book. The using of technical terms, of which some of the Council could not cipher out the meaning, was to be brought to a stop. The motion, which was carried unanimously, also states that in future proper names must not be employed to designate diseases, and they urge elimination of any ambiguity.

A motion that teachers should not be allowed to examine on the subject which they taught, except in anatomy and physiology, was made by Dr. Vardon, and caused considerable discussion. Opinions on both sides were advanced. The motion was carried by a vote of 13 to 9.

Dr. Britton moved that all fifth-year men be compelled to do work in a hospital. The great objection to this was that the hospitals would not admit any student not a licentiate to administer chloroform.

A committee comprising Drs. Hardy, Moorehouse, Britton and Ryan were appointed to interview superintendents of hospitals and bring in a report.

NOTES.

We learn from the *British Medical Journal* that the International Congress of Hydrotherapy held its fourth annual meeting at Abbazia September 28, 29, 30.

The nurses of Toronto and their friends held a very pleasant entertainment, known as "The Fair of All Nations," at Massey Hall, November 12, 13, 14. The total receipts were about $2,600, out of which the net profit made was about $1,500. This will be added to the fund to be used for the erection of a Home for Nurses in Toronto.

A new association, to be known as the Manitoba Medical Association, was recently organized, with the following officers: Dr. J. R. Jones, of Winnipeg, President; Dr. Macdonald (Brandon), 1st Vice-President; Dr. Macrae (Neepawa), 2nd Vice-President; Dr. Halpenny (Winnipeg), Secretary; Dr. Kenny (Winnipeg), Treasurer; Drs. Hicks (Griswold), D. G. Ross (Selkirk), Keele (Portage), Speechly (Pilot Mound), and Harrington (Dauphin), Executive Committee; and Drs. Blanchard and Moody (Winnipeg), Auditors.

The first woman who has had the honor of being elected Mayor in Great Britain is a well-known physician, Dr. (Mrs.) Garrett Anderson. Dr. Anderson was elected Mayor of the city of Alderburgh at the election held November 23rd. In addition to her professional duties, she has taken a great interest in public matters for many years. As far back as 1870 she was elected at the top of the poll for Marylebone on the first School Board for London. She is 72 years of age.

The Nominations for the Lord Rectorship of the University of Edinburgh were made October 20th, at a mass meeting of the students, held in the University. Mr. Churchill, M.P., was nominated on behalf of the Liberals, and Mr. George Wyndham on behalf of the Conservatives, while Professor Osler of Oxford was nominated as an independent candidate. At the election Mr. George Wyndham received 826 votes; Mr. Winston Churchill received 727 votes, and Dr. Wm. Osler received 614 votes.

Banquet to Dr. Riordan.

Dr. Riordan's many friends were much delighted to see him after his return from New York looking sound and fit as of old. A number of his intimate friends entertained him at dinner in the Toronto Club on the evening of November 4th. Those present had a very happy time indeed, as things went off with a hum which cannot be described, but was very highly appreciated by both guest and hosts. The following were present: First, the genial guest, Dr. Bruce L. Riordan, and with him Drs. Allen Baines, W. H. B. Aikins, J. O. Orr, G. R. McDonagh, W. P. Caven, H. J. Hamilton, J. D. Thorburn, A. Primrose, H. A. Bruce, Samuel Johnston, A. H. Wright, H. B. Anderson, G. A. Bingham, A. H. Garratt, E. E. King, J. T. Fotheringham, J. F. W. Ross, J. Silverthorne, J. Milton Cotton.

D. King Smith, R. J. Dwyer, and J. R. Serson, and also Messrs. W. A. Wilson, G. G. S. Lindsay and John Massey.

Donation to Toronto Western Hospital.

A very handsome donation of $25,000 has recently been made to the Toronto Western Hospital. The name of the donor is at present unknown. It is hoped that the by-law will be passed in January whereby this hospital will benefit to the extent of $50,000. It is also hoped that one or two pavilions will be erected in the near future. At the last meeting of the Board the officers elected for the year were: Mr. E. B. Osler, M.P., Hon. President; Hon. T. Crawford, M.P.P., President; Mr. D. Fasken and Mr. H. Langlois, Vice-Presidents; Dr. Thomas McCullough, Medical Superintendent; Dr. Price-Brown, Chairman of the Management Committee; Dr. J. B. Gullen, Treasurer; Dr. John Ferguson, Secretary; Dr. A. A. Macdonald, Dean of the Medical Staff. The other members of the Board are: Chancellor McKay, of McMaster University; Mr. H. C. Tomlin and Mr. Randolf Macdonald.

Personals.

Sir James Grant, after spending a week in Toronto, returned to Ottawa November 23rd.

We learn with pleasure that Dr. William A. Young, 145 College Street, Toronto, is rapidly recovering from his recent severe illness.

Dr. J. T. Gilmour, of Toronto, was elected President of the American Prison Association at the meeting held in Richmond, Virginia, November 19th.

Lieut.-Col. J. A. Grant has been permanently appointed Principal Medical Officer of Military District No. 11, in the place of Lieut.-Col. Nattress, deceased.

Dr. Ernest Jones has been appointed Pathologist and Neurologist at the Toronto Hospital for Insane, in the place of Dr. J. G. FitzGerald, who retired last October to accept an appointment in Boston, Mass.

Dr. Lemon has been appointed resident physician, and Dr. Caulfield, late interne pathologist, Toronto General Hospital, resident pathologist at the Muskoka Hospital for Consumptives, Gravenhurst.

Dr. W. F. Adams, who formerly spent four years in China, returned to that country last month. He left Toronto November 22nd, and expected to sail from Seattle November 24th. He expects to take charge of the hospital at Yo-Chow, Province of Hunan, situated about 800 miles up the Yangtse-Kiang River.

Dr. C. D. Parfitt, who was for six years physician-in-charge of the Muskoka Free Hospital for Consumptives at Gravenhurst, Ont., and has been for the last seven months resident consultant to that institution and the Muskoka Cottage Sanitarium, has resigned his position. Dr. Parfitt will remain in Gravenhurst and continue practice in pulmonary and laryngeal tuberculosis.

At a meeting of the Board of Trustees of the National Sanitarium Association, held in Toronto November 20th, Dr. Alfred H. Caulfield, of the Toronto General Hospital, was appointed Resident Pathologist to the Muskoka Sanitarium and the Free Hospital for Consumptives. Dr. W. S. Lemon was added to the resident staff of both institutions. Dr. W. B. Kendall continues in his position as Medical Superintendent of the two institutions.

Obituary.

SIR HENRY PITMAN, M.D.

Sir Henry Pitman, Registrar of the College of Physicians of London, died November 6th, aged 100. He reached the age of 100 July 1st, 1908. On that occasion he received many congratulations and the following telegram from His Majesty the King: "I am commanded by the King to offer you his cordial congratulations on the attainment of your 100th birthday, and to express his sincere hope that you may be spared for many years. His Majesty is well aware of the valuable services you rendered to the medical and surgical profession while acting as Registrar of the College of Physicians. (Signed) Knollys."

GEORGE ROOT, M.D.

Dr. George Root, formerly of Fonthill, Ont., and lately practising in Alliance, Ohio, died as the result of a gun accident at Berkendale, near Huntsville, November 7th, aged 28.

THOMAS M. WILSON, M.D.

Dr. Wilson, of Atwood, Ont., died of glanders at the Presbyterian Hospital, Chicago, November 19th. He is supposed to have become infected while pursuing a post-graduate course at the Rushwell Medical College.

WILLIAM STEPHEN, M.D.

Dr. Stephen, formerly of Toronto and Tillsonburg, Ont., died at Vancouver, B.C., October 20th.

SAMUEL PASSMORE MAY, M.D.

Dr. S. P. May, who was for over fifty-one years in the service of the Province of Ontario as an official of the Educational Department, died October 20th, at his residence, 514 Parliament Street, aged 80.

Book Reviews.

PRACTICAL POINTS IN ANESTHESIA. By Frederick-Emil Neef, B.S., B.L., M.L., M.D., New York. Price, semi-de luxe cloth, 60 cents, post paid. Library. Flexible leather, $1.50, post paid. New York: Surgery Publishing Co., 92 William St.

This very practical monograph presents the author's impressions on the correct use of chloroform, ether, etc., and is a simple and coherent working method, and is of particular value to those general practitioners who are so situated that the services of a trained anesthetist cannot be secured. Among the subjects covered are: Induction of Anesthesia, Cardiac and Respiratory Collapse, When Shall the Patient be Declared Ready for Operation, Maintenance of the Surgical Plane of Anesthesia, Important Reflexes, Vomiting During Anesthesia, Obstructed Breathing, Use of the Breathing Tube, Indications for Stimulation, Influence of Morphine on Narcosis, General Course of Anesthesia, Awakening, Recession of Tongue After Narcosis, Post-Operative Distress, Minor Anesthesia with Ethyl Chloride, Intubation Anesthesia, etc., etc.

This extremely practical and useful little book is condensed to about fifty pages, but every page is replete with valuable data. Printed upon heavy India tint special Cheltenham paper with Cheltenham type, with marginal headings in contrasting colored ink.

ANATOMY, DESCRIPTIVE AND SURGICAL. By Henry Gray, F.R.S., Fellow of the Royal College of Surgeons; Lecturer on Anatomy at St. George's Hospital Medical School, London. Seventeenth edition. Thoroughly revised and re-edited, with additions by John Chalmers Da Costa, M.D., Professor of the Principles of Surgery and of Clinical Surgery in the Jefferson Medical College, Philadelphia; and Edward Anthony Spitzka, M.D., Professor of General Anatomy in the Jefferson Medical College, Philadelphia. Illustrated with 1,149 engravings. 1908. Philadelphia and New York: Lea & Febiger.

This new American edition of Gray's Anatomy is dedicated to William W. Keen, M.D., LL.D., Hon. F.R.C.S. (Eng. and Edin.), the distinguished Professor of Surgery in Jefferson Medical College, as an evidence of the admiration, the affection and the gratitude of his colleague and former assistant, the editor.

The early death of Henry Gray has enlisted in successive revisions of this work the services of many leading anatomists. Passing over the intervening editions, and bearing in mind the close relations between anatomy and surgery, it is scarcely necessary to allude to the advantage of uniting in this new issue the knowledge of so eminent a surgeon as Dr. DaCosta, and of Dr. Spitzka, equally eminent as a specialist in anatomy. Professor Spitzka also possesses the ability of a skilful artist, and his delineations, therefore, convey his grasp of structure directly to the eye of the reader.

As simple directions are given for dissecting, this single volume will serve every requirement of the student throughout his course.

The new nomenclature and that still in common use have been introduced in a manner rendering the work universal in the prime essential of terminology. The table of contents is so arranged as to give a complete conspectus of anatomy, a feature of obvious value. The whole book is thoroughly organized in its headings and the sequence of subjects, so that the student receives his knowledge of the parts in their anatomical dependence.

In this new edition, following so speedily its predecessor, there have been many alterations, eliminations, and some additions of important anatomical facts, as well as changes and improvements of equal extent in the illustrations. Histology and embryology have been treated by résumés, as heretofore. Free quotations have been made from numerous treatises, monographs and reports, proper credit to the authors being carefully given. Owing to its accuracy and simplicity, the Latin or International nomenclature is destined eventually to displace older methods. Such a desirable transition will, of necessity, be gradual, because in the minds of many the older names are not only fixed, but also cherished. Hence, in this edition the custom previously adopted is still pursued, and the names according to the new nomenclature have been introduced in parentheses following those still in current use in English-speaking countries.

The section on the Nerve System has been largely rewritten, with due regard to the advances recently made in the morphological and embryological aspects of the subject. The more important physiological and pathological data have been presented in their anatomical bearings in order to demonstrate with greater clearness the mutual relations of the structure and functions of the nerve system. Special effort has been bestowed on combining

the features visible to the naked eye with those seen only under high magnifying powers. By the knowledge of macroscopic and microscopic structures, the attentive student is enabled to resolve or reconstruct, in the three dimensions of space, and see with his mental eye the opaque interior resolved into intricate yet well-defined projecting and associating mechanisms. Such study is assisted by new illustrations depicting hidden structures in accordance with this principle. Much that could not be described in detail within the confines of a text-book has been summarized in such a way as to be of assistance even to advanced students.

Points of Practice in Maladies of the Heart. By James Sawyer, Knt., M.D. (Lond.), F.R.C.P., F.R.S. (Ed.), F.S.A.; Consulting Physician to the Queen's Hospital, lately a Professor of Medicine in the Queen's College. 1908. Birmingham: Cornish Brothers, Limited.

This brochure consists of the three Lumlein lectures delivered at the Royal College of Physicians of London at various times during the months of March and April, 1908. It is well to have these classical lectures bound and thus preserve a valuable contribution in connection with diseases of the heart in permanent form.

Clinical Treatises on the Symptomatology and Diagnosis of Disorders of Respiration and Circulation. By Prof. Edmund VonNeusser, M.D., Professor of the Second Medical Clinic, Vienna; Associate Editor Nothnagel's Practice of Medicine. Authorized English translation. By Andrew MacFarlane, M.D., Professor of Medical Jurisprudence and Physical Diagnosis, Albany Medical College; Attending Physician to St. Peter's and Child's Hospital and Albany Hospital for Incurables. Part II. Bradycardia and Tachycardia, with Bibliography. 1908. New York E. B. Treat & Co.

The heart as the *fons et origo* of the circulation must be considered seriously in practically every disease from the point of view of prognosis as well as an index as to the cause of the malady. This little volume of one hundred and fifty pages on Bradycardia and Tachycardia ably presents all the factors involved in the decrease and increase of the cardiac action. Dr. Andrew MacFarlane is to be congratulated as an able translator and editor

PHYSICAL METHODS IN THE TREATMENT OF HEART DISEASE. By Arthur G. Dampier-Bennett, M.R.C.S. (Eng.), L.R.C.P. (Lond.); author of the Re-education of Co-ordination by Movements, Thermal Methods of Treating Chronic Arthritis, etc., etc.; Visiting Physician to the Royal Marine Hotel and Medical Baths, Kingstown; late Physician and Medical Superintendent St. Anne's Hydropathic Establishment; Fellow of the British Balneological and Climatological Society, etc., etc. 1907. Bristol: John Wright & Co. London: Simpkin, Marshall, Hamilton, Kent & Co.

Much of the subject matter of the present work first appeared as a series of articles in the pages of the PRACTITIONER. It is regrettably short, only of five chapters, but these, dealing with Rest and Massage, Electrical Applications, Diet, Drugs, and the Nauheim Bath, are well worth study and thoughtful consideration.

THE CAUSE AND PREVENTION OF BERI-BERI. By W. Leonard Bradden, M.B., B.S., F.R.C.S., State Surgeon Negri Sembilan, Federated Malay States. 1907. $6.00. London and New York: Rebman, Limited.

This work consists, as the preface states, very largely of an official report to the Colonial Office in 1904, with excerpts from the literature on beri-beri to bring it up to date. The author has dealt with every phase of the subject in a thoroughly scientific manner, and this volume is the last word on the disease.

ON MEANS FOR THE PROLONGATION OF LIFE. Third and enlarged edition of a lecture delivered before the Royal College of Physicians, on December 3rd, 1903, by Sir Hermann Weber, M.D., F.R.C.P., Consulting Physician to the German Hospital, the National Hospital for Consumption, Ventnor, and the Mount Vernon Hospital for Consumption. 1908. London: Jno. Bale, Sons & Danielsson, Limited, Oxford House, 83-91 Great Titchfield St., Oxford St. W.

In 1904 we had the pleasure of reviewing and commenting upon this lecture of Sir Hermann Weber, which was first published in the *British Medical Journal*. The author then, as now, had nothing but the sanest advice to offer, and gave a careful review of the rules of living he had found most helpful and

practical. Sir Hermann, who has himself already passed the Psalmist's span, now publishes a third enlarged edition of this lecture, with a table of the digestibility of the common foods added—a work which we can heartily recommend as an epitome of modern personal hygiene.

Atlas of Clinical Surgery, with special reference to Diagnosis and Treatment for Practitioners and Students. By Dr. Ph. Bockenheimer. English Adaptation by C. F. Marshall, M.D., F.R.C.S., with 150 colored figures. New York: Rebman Company, 1123 Broadway.

The three volumes before us of "Clinical Surgery" are undoubtedly the best system of clinical surgery extant. The name of Von Bergmann carries with it, beyond any dispute, the highest advance in surgery, and the illustrations, taken from models made by F. Kolbow of Berlin, are the nearest to nature of any illustrations it has been our pleasure to see. The process of reproduction is as nearly accurate as will be attained in many long years.

Each volume is in itself a grand series of clinics, the illustrations accurately depicting the condition, the letter press description being concise, yet full, the operative description brief and accurate.

The editor, Prof. Bockenheimer, assistant of the late Prof. Von Bergmann, has undertaken and accomplished in a very excellent manner a work that is to fill a large place in surgery. The study of surgery to-day must be largely clinical. In the smaller places, and with those not connected with large institutions, clinical material must necessarily be scarce; a system like this fills that want so admirably that one can really advance with the times by having in his possession a work such as this, while those connected with large hospitals have a most elaborate aid to their research.

This work first appeared in Germany a few years ago, and has been brought absolutely up to date by the translator, Dr. C. F. Marshall of London, who certainly deserves the approbation of the profession. It is impossible to criticize a work of this kind on account of its accuracy of detail, thoroughness in handling the subject, and the personnel of the editors and author—than whom no greater surgeon graced the profession.

There are in the three volumes 150 plates, dealing with surgery from its clinical standpoint, from the simplest to the most

complicated conditions. In many of the conditions depicted, differential diagnosis, which is a striking feature of this work, is beautifully illustrated. Figure 7, showing superficial carcinoma of the tongue, stands side by side with papilloma, as well as one of the more advanced conditions of carcinoma, all on the one plate for comparison. Each of these conditions could easily be mistaken for the other when seen separately, but when clinically compared they show striking differences. Then, again, the illustrations showing carcinoma of the breast: here are some most beautiful illustrations showing clinical differences in the many forms of breast cancer, showing the early stages of the disease, and carrying the illustrations through to the neglected or late ones.

There is another fine feature in the work—Treatment. This feature occupies a considerable space and is most succinct, not going into minutiae, but giving very accurate descriptions of the operative procedures necessary in each of the cases. If we referred to the different conditions as depicted it would only be to admire and appreciate, and of the 150 it would be impossible to refer to them all.

A word should be said in congratulation to the publishers. Rebman Company have undoubtedly excelled themselves in the typography and binding, but more especially in the illustrations. Illustrations make or mar a work of this character, and no single one can be pointed to as not being perfect in this present series.

Pathogenic Micro-organisms, including Bacteria and Protozoa. A practical manual for students, physicians and health officers. By William Hallock Park, M.D., Professor of Bacteriology and Hygiene, University and Bellevue Hospital Medical College, and Director of the Research Laboratory of the Department of Health, New York City; assisted by Anna W. Williams, M.D., Assistant Director of the Research Laboratory; Pathologist to the New York Infirmary for Women and Children. Third edition, enlarged and thoroughly revised, with 176 engravings and 5 full-page plates. New York and Philadelphia: Lea & Febiger. 1908.

A volume of wide scope and great interest. Professor Park has divided the work into three parts: The Principles of Bacteriology, Bacteria Pathogenic to Man, and The Protozoa. While there has been added much that is of great importance to the profession generally since the second edition appeared

two years ago, such as the bacteriology of the normal intestines, the subject of the opsonic index, etc., the advance in the knowledge of bacteriology has been met by a thorough revision of the former editions.

Those who are interested in the agitation for a pure milk supply (and who is not?), will do well to read the chapter on the bacteriology of milk in its relation to disease. In it is considered the manner of contamination of milk, the effect of impure milk on infants and older children, as well as many tables of importance and much experimental work. Another subject of great interest locally and which is fully dealt with is that of rabies, the basis of diagnosis being the presence of the negri bodies.

International Clinics. A quarterly of illustrated clinical lectures and especially prepared original articles on treatment, medicine, surgery, neurology, pediatrics, obstetrics, gynecology, orthopedics, pathology, dermatology, ophthalmology, otology, rhinology, laryngology, hygiene, and other topics of interest to students and practitioners, by leading members of the medical profession throughout the world; edited by W. T. Longcope, M.D., Philadelphia. Volume III. Eighteenth series. Philadelphia and London: J. B. Lippincott Company. 1908.

This work is so well known to our readers that it is unecessary for us to point out its various merits. The articles have always been of the very highest type, by men who are the acknowledged leaders of their profession. Few other works come to our desk so full of practical hints and useful information as International Clinics.

The contributions of Vol. III. are all exceedingly interesting. If we might be permitted to choose, we would especially mention the article on sciatica, by Sir Dyce Duckworth; modern treatment of fractures, by Eldred M. Corner; and "On the Trail of the Subconscious," by Joseph Jastrow. We are glad also to read an article on cleft palate and hare lip by Dr. F. N. G. Starr, of Toronto, in which he describes a new way of taking the tension off the stitches. The whole work contains the finest collection of monographs in the English language. We heartily recommend it to anyone who is not yet familiar with it.

A Manual of Diseases of the Nose and Throat. By Cornelius G. Coakley, M.D., Clinical Professor of Laryngology in the University and Bellevue Hospital Medical College, New York. New (4th) edition, 12mo., 604 pages, with 126 engravings and 7 colored plates. Cloth, $2.75 net. Philadelphia and New York: Lea & Febiger. 1908.

In this new edition the author has, in a number of instances, revised the arrangement, and when necessary, in order to bring the investigation and treatment down to the present date, has added much new matter to the 3rd edition.

In other instances a complete change has been made. The subjects of "Spurs" and "Deviations" of the septum have been replaced by another, entitled, "Deformities of the Septum," which covers the whole field. Evidently believing that the submucous resection is applicable to all cases of septal deformity, in young as well as old, and that it has come to stay, the writer gives all other operations a wide berth, confining his description entirely to the submucous resection.

While devoting only seventeen lines to all the other methods of operation, by all the scientific rhinologists of the last half century, he devotes sixteen pages to a description, with illustrations, of this new and popular method, adding on the seventeenth page the words: "For the intense headache which begins in a few hours after the completion of the operation, I have found nothing better than cold applications to the forehead and nose, and the internal administration of one-half grain of codein."

When conservative surgery in scientific hands is believed to be the ideal of excellence, it is doubtful if the removal of the triangular cartilage and portions of the vomer will ever be the only method of correcting all cases of septal deformity. And whether it is right for a popular author to impress upon his many readers that it is the only method applicable to all cases is also open to question.

In the treatment of chronic disease of the frontal sinus, the writer also makes a marked change from that adopted in his last edition. The method he advocates now is a modification of Killian's. He still chisels away the entire anterior wall above the superciliary ridge after dissecting up the superficial tissues, and curettes away every particle of mucous membrane from the sinus and fronto-nasal duct; but instead of treating it as an open wound, as in his last issue, packing it from the

bottom and obliterating the fronto-nasal passage, he inserts a cigarette drain from the frontal sinus through the fronto-nasal passage and the nose, cutting it off at the vestibule; after which he closes the external wound with sutures and applies compresses to hold the skin and underlying tissues against the posterior wall of the sinus, until healing takes place.

Notwithstanding such methods, in themselves good, which he sometimes presses beyond the border-line, Coakley has given to the profession the fourth edition of an excellent work. As a laryngologist and teacher he possesses both practical and didactic knowledge; and in a clear and succinct manner he takes his reader from the beginning right through to the end of his subject. The book is well up-to-date, and although he has eagerly accepted some of the new methods—one would scarcely dare to call them fads—he has wisely discarded others.

The work is excellently gotten up. The type is large and clear, the illustrations well defined, and the entire work a credit to the publishers.

PRICE-BROWN.

THE PRACTITIONER'S VISITING LIST, 1909. Philadelphia and New York: Lea & Febiger.

Although a new visiting-list reminds us of the passing of time, yet this little book always receives a warm welcome, because, for so many years, it has saved us so much labor. We have proved its accuracy, worth and usefulness, and can confidently assert that to use it once is to use it always.

Selections.

Arterio-Sclerosis—a New Theory and Treatment.

Arterio-sclerosis has been brought very much to the front within the past few years, being a leading subject in every medical congress.

The fact is not surprising. The relations between normal senility and arterio-sclerosis are very close, rendering the etiology and treatment of this affection of general if not universal interest. On the one hand, the causes claimed as provoking the development of arterio-sclerosis are so numerous that it is difficult for one to hope to escape their influence, while, on the other hand, very few persons above 45 or 50 years of age can be said to be entirely free from sclerous lesions.

Dr. Scheffler, of St. Etienne, a rising physician, has made a special study of this disease, and has embodied the results of his researches in a small pamphlet which he was good enough to forward to me. His studies cover an extensive ground, and his conclusions seem convincing. For him arterio-sclerosis is the consequence of organic demineralization—that is to say, there exists a deficiency of silicates. Hence the treatment he advocates: Internal administration of silicate of soda, a syrupy liquid like silicate of potash, and easily mixed with water.

The description of the lesions of arterio-sclerosis is hardly necessary to give. They may be given in a few words: Fibrous thickening of the arterial walls in case of vessels of small or average calibre; calcareous infiltration (atheroma) of these same walls in case of the largest arteries (aorta).

These sclerous lesions can affect in general all the arterial system, or, on the contrary, only certain sections, either wholly or partially.

Thus, Levine published two cases of gastric arterio-sclerosis, demonstrated by post-mortem, in the absence of generalized lesions. Frequently the aorta alone is attacked, or the kidney, or the brain. But in reality sclerous lesions rarely attack one organ to the exclusion of all the others; yet one organ may suffer more than another, and, clinically speaking, it is lawful to distinguish, under the name of brain, heart, kidney, sclerosis cases where the predominating symptoms imply one or other of these organs.

As a result of these sclerous lesions, the calibre of the arteries is diminished, and their elasticity weakened. These two causes

compromise the irrigation of the tissues, not only from the fact that the nutritive substances are rendered insufficient, but also—and, it might also be said, above all—because the irrigation diminishing in intensity, the waste products of cellular life are evacuated less rapidly and tend to accumulate in the organism. This decrease of vitality shows itself in the individual, not only by a more rapid advance towards senility, but also by diminished resistance to the different factors of morbidity.

Another consequence of vascular lesions derived from arterio-sclerosis is increased work for the heart, with fatigue of the organ, struggling to send the blood wave through vessels of diminished calibre and elasticity.

The symptoms of arterio-sclerosis are known to all. The patients present generally a dry skin, and are particularly sensitive to cold. Alopecia is frequent, the temporal arteries tortuous, the arteries hard, and the tension is often exaggerated. Sometimes symptoms of angina pectoris are observed, with dyspnea on slight effort and dilatation of the aorta.

Auscultation of the heart reveals a bruit de galop, and the second sound sharp and strong. Insufficient irrigations of the lower limbs may provoke pains of an undefined character—tarsalgia, cramps, intermittent claudication, and even gangrene of the extremities.

The kidney is generally affected with interstitial nephritis, manifesting itself by cramps, sensation of numbed fingers, polyuria, with diminished toxicity of the urine, while albuminuria may be absent or insignificant.

Arterio-sclerosis can also provoke hemorrhage, epistaxis, hemoptysis, hematemesis.

As regards the brain, the morbid symptoms may vary between slight inaptitude for work to cerebral hemorrhage.

Prof. Windscheid, of Leipzic, gives three signs of arterio-sclerosis, which, when associated, possess great value as a means of diagnosis: headache, vertigo, loss of memory. Another symptom remarked by Dr. Scheffler, and which he considers of great importance, is an extraordinary intolerance for alcohol on the part of the patients.

Such is a summary of the principal morbid troubles due to arterio-sclerosis.

The diagnosis may be either very easy or very difficult, according to the case. But in the presence of a patient over 40 years of age, the clinician should always bear in mind the possibility of the existence of sclerous lesions, and examine carefully the

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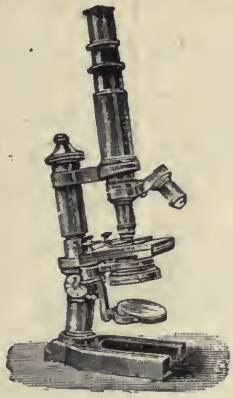

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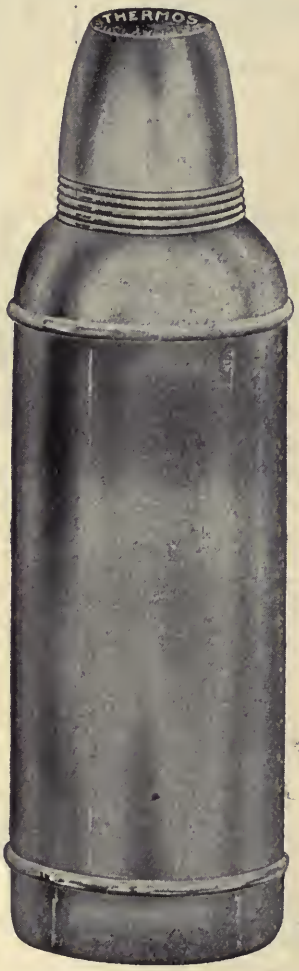

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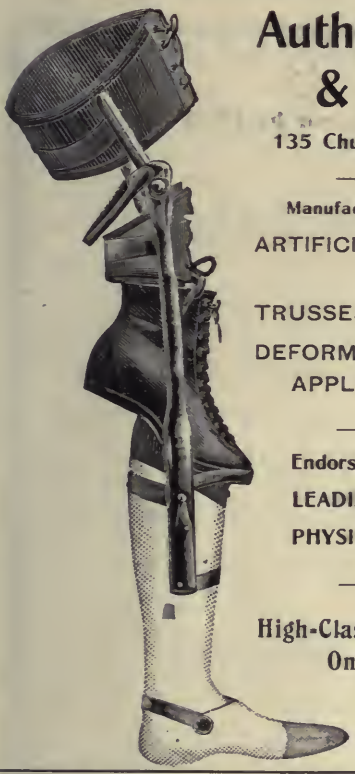

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whatever to do with the training of one of the sexes for a medical degree. Such a decision would be a confession of failure where other places of learning—Glasgow, for example —have succeeded. It may be taken, therefore, that the University authorities will not give up their function of receiving women for graduation in medicine.

"But abandonment of the examination for degrees would be a more common-sense, as well as a more honest, policy than that which the University Court have chosen to follow. It would be an admission that there are practical difficulties in the way which prevent them from fulfilling the obligations they owe to the women students in medicine and to the public. That there are practical difficulties no one need doubt. But practical difficulties exist to be surmounted, when the credit and the interests of the University plainly point to going forward. Some of these difficulties, there is reason to believe, will disappear if they are fairly faced; some are but other names for prejudice, or for what was called, in the Freemasons' Hall, false sentiment. In any case, the University authorities, while they may go forward, or go back, cannot possibly continue to stand still and play with the question. For sixteen years the University has been content, so far as concerns the women resorting to Edinburgh for teaching in medicine, to be a mere degree-granting institution; its functions have been practically confined to those of an Examining Board. This, it need hardly be pointed out, is wholly out of harmony with the ideal of a Scottish University, and of that of Edinburgh in particular."

* * * *

"It must be growing manifest to the members of the Court themselves that their halting and *non possumus* attitude cannot be maintained. The wiser, as well as the more dignified course, would be to go forward without waiting for more prodding from behind by necessity and public opinion"

The Use of Diuretics in Bright's Disease.

In the presence of chronic contracted kidneys the polyuria which is usually present does not tempt the physician to employ a diuretic, but in parenchymatous nephritis when urinary secretion is usually scant and when albumin is present in large quantities, the routine administration of diuretics is very largely resorted to. That this method is by no means always wise is asserted by Brown in the *Clinical Journal* of January

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condition of the peripheric circulation, the elasticity of the superficial arteries, and above all measure the arterial tension.

As to the prognosis of arterio-sclerosis, it varies naturally according to the extent, the locality, and the multiplicity of the lesions. Age, profession, hygienic habits, and antecedents of the patients have also a certain influence. The same factors influence also the duration of the malady.

One patient may live for years, while another is cut off suddenly by cardiac or cerebral accident. Where death is the direct result of arterio-sclerosis, it terminates generally by asystolia or uremia, or both together. Leaving aside cerebral hemorrhage or death from sycope, it may be said that asystolia and uremia constitute the natural end of individuals affected with arterio-sclerosis.

The etiology of arterio-sclerosis might be summed up under two heads: Intoxication of the organism and individual predisposition. Intoxication may be due to the introduction into the economy of certain poisons: Alcohol, tobacco, lead, "high" food, or, on the contrary provoked by toxins resulting from disturbance in the normal functions of the organism (physical or intellectual strain, digestive troubles, arthritism, typhoid fever, diphtheria, syphilis, malarial fever). Insufficient defecation resulting from renal or hepatic lesions is another cause.

Perhaps the true efficient cause is to be found in a particular vulnerability of the arteries, the result of hereditary or predisposition. This opinion, sustained by Maragliano two years ago at the Congress held at Rome, has many partisans, including Dr. Scheffler. Every practitioner knows that cerebral haemorrhage is an hereditary affection, more so, according to Dieulafoy, than phthisis and cancer.—French correspondent, *Medical Press and Circular.*

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Aq., q. s. ad ℥ j.

M. Sig. Inject ten or fifteen drops deeply into tissue along course of nerve.—*Medical Recorder.*

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Maxims of an Old Physician.

Under the signature, "Dr. R. L.," a recent number of *Le Scalpel* contains a collection of maxims for young practitioners as enunciated by an old physician. The following is a somewhat free translation: (1) Look after a patient as you would be looked after yourself. (2) A good doctor is he who is able to treat each case on its own merits. (3) Never show anger towards a child. (4) Show your patient that you understand the cause of his suffering, but do not make him as wise on the point as yourself. (5) If your patient sends for you, go; but do not be eager to anticipate his desire for your presence. (6) Look after details; sometimes the effects of a massage will be judged by the amount of talc you have powdered on to the part. (7) A doctor in a carriage never looks a bungler. (8) When called to a patient, let him be under the impression that you have already dealt successfully with a similar case. (9) Every man is in need of a little of the mysterious, more especially when he is sick. (10) Be in the habit of making people understand that you have, because of your profession, a different conception of things from theirs. (11) If payment is offered on the spot, accept it always. This procedure is the usual one in England, and the English pass for a practical people. (12) When sending in your bill, remember that patients will weigh your knowledge against the number of five-franc pieces asked for. (13) A doctor is never allowed to be in a hurry, except during an operation and when his patient is asleep. (14) Explain nothing to a patient who has some smattering of things medical. (15) He who demands small fees passes for an ignoramus; he who demands too much is a money-grabber. (16) Beware of women and their tittle-tattle. (17) If you keep a cool head as regards your patient, he will keep a cool one as regards yourself.

Where There is a Burning sensation when urinating, sanmetto in teaspoonful doses three or four times a day usually gives relief. If the urine is alkaline, ammonium benzoate in connection with sanmetto will prove helpful, and citrate of potash when the urine is acid.

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"Why, I've done so," replied the cash grocer.

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"What have I left undone up?"

"That thumb of yours that you weighed up with the butter," snorted the grouchy customer. "I want it for dog meat. Wrap it up!"—*Judge.*

Pneumothorax.—Morphine or other sedatives may be needed to relieve pain, and sometimes even chloroform may be necessary. Stimulants, too, are usually required. Cupping the chest, or even venesection is particularly useful when there is much cyanosis. The removal of the air is needed when there is great distention and consequent dyspnea. A fine trocar should be introduced and the air allowed to escape. Anything in the shape of aspiration would probably reopen the wound in the pleura, and more air would thus pass into the pleural cavity.—*The Hospital.*

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Of this life, it seems to me,
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Someone asks you, "How d'ye do?"
An' you've only got es' two
Answers, if the truth is told—
"Gettin' well of catchin' cold."

When your throat is feelin' sore,
An' your head begins to roar,
Then you know if you wait
Patiently you'll feel first-rate.
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You'll be catchin' cold again.
That's 'bout all there is to tell—
Catchin' cold an' gittin' well.

The Lack.—Knicker: "There are plenty of books telling how to save life while waiting for the doctor."

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